



July 23, 2010

Alaska Department of Transportation & Public Facilities
2200 East 42nd Avenue
Anchorage, AK 99508

Attn: Mr. Ronald Searcy

RE: CLASS V INJECTION WELL SAMPLING, ADOT&PF MAINTENANCE FACILITIES, VARIOUS LOCATIONS, ALASKA

This report presents the results of Shannon & Wilson, Inc.'s (Shannon & Wilson's) drilling and sampling activities conducted at ten Alaska Department of Transportation and Public Facilities (ADOT&PF) maintenance facilities in Alaska. The purpose of this project was to evaluate the subsurface soil for potential contamination at maintenance facilities' injection wells to satisfy the Environmental Protection Agency's (EPA's) May 4, 2010 request for analytical data.

The project was performed under Shannon & Wilson's ADOT&PF Term Contract - Statewide Hazardous Waste Term Services, Agreement No. 02582014. Authorization to proceed with this project was received on June 16, 2010 with Notice to Proceed (NTP) No. 9. The work was conducted in material accordance with our June 2010 revised work plan, including EPA's June 23, 2010 comments to the work plan, and the Alaska Department of Environmental Conservation's (ADEC's) May 2010 *Draft Field Sampling Guidance*.

Site and Project Description

The injection wells evaluated in this project are located at the ADOT&PF's Silvertip, Chulitna, Homer, Birch Lake, Nelchina, Cantwell, Healy, Trims, Slana, and Coldfoot maintenance stations. Approximate locations of the project sites are shown on Figure 1, and the project site plans are included as Figures 2 through 11.

Based on information provided by the ADOT&PF, initially the project sites were constructed with separate domestic and non-domestic wastewater disposal systems. At several of the sites the non-domestic wastewater system was combined with the domestic system; resulting in two outfall locations to characterize. The sites are located along the Alaska highway system but are considered to be remote; areas surrounding the sites are sparsely populated and public water/sewer service is not available. The physical addresses for each of the project sites are:

- Silvertip – Mile 56.7, Seward Highway
- Chulitna – Mile 121.5, Parks Highway
- Homer – 3450 Sterling Highway
- Birch Lake – Mile 311, Richardson Highway
- Nelchina – Mile 141, Glenn Highway
- Cantwell – Mile 209.9, Parks Highway
- Healy – Mile 248.7, Parks Highway
- Trims – Mile 218.2, Richardson Highway
- Slana – Mile 60, Tok Highway
- Coldfoot – Mile 175, Dalton Highway

Drilling and Sampling

Prior to initiating the field efforts, ADOT&PF personnel identified each subject injection well's outfall location with a wooden stake and obtained utility clearance for drilling. Depending on geographic location of the project site, the drilling services were provided by Discovery Drilling, Inc. of Anchorage, Hughes Drilling, Inc. of Soldotna, or by Homestead Drilling Co. of Fairbanks. The drilling contractors brought decontaminated drilling equipment sufficient to complete the field work without the need to decontaminate at the site. A Shannon & Wilson representative, who is a Qualified Person as defined in 18 AAC 75.990, was present at each of the project sites to oversee and document the field efforts and to sample and screen the subsurface soil. Our field representatives used swing tie measurements to document boring locations in addition to the global positioning system (GPS) coordinates using a hand-held GPS.

One discharge point was evaluated (one boring advanced) at six of the sites, and two discharge points were evaluated at the remaining four sites, Birch Lake, Cantwell, Chulitna, and Homer. Except for the borings at the Silvertip and Homer sites, direct-push drilling equipment was used to recover the subsurface soil samples. Hollow-stem augers and split-spoons were used to recover one of the samples at Silvertip and all the samples at the Homer site. The first sample was recovered with direct-push technique at the Silvertip site; however, the field crew switched to auger drilling after not being able to recover sample from the about 7 feet to 13 feet below ground surface (bgs). Hollow-stem auger and split spoon were used to recover a sample from below the reported discharge point. Direct-push drilling equipment was not available at the Homer site. While drill cuttings were not generated from the direct-push technique, the hollow-augers were spun counterclockwise and pulled from the ground to eliminate drill cutting production. Local soil was used to bring the boring locations to grade, if needed. Based on depths of the discharge points as reported by the ADOT&PF, depths of the borings ranged from 8.5 feet to 25 feet bgs. Photographs depicting boring locations and site conditions are included in Figures 2 through 11.

Subsurface soil samples were recovered from each borehole generally at 2.0-foot to 2.5-foot intervals starting from 2 feet to 5 feet bgs. Decontaminated stainless steel spoons were used to transfer the soil to the laboratory-provided sample containers. Samples were screened in the field using a Thermo Environmental Instruments 580B photoionization detector (PID). Based on PID readings and sample location, below the reported discharge point, one soil sample from each boring was submitted for chemical analysis. Immediately after collection, the samples were placed into a designated sample cooler maintained at approximately 4 °C with ice substitute. For quality control purposes, one field duplicate sample, designated Sample BIS3, was collected from the Silvertip site. Also, six trip blank samples accompanied the sample coolers to document whether cross-contamination occurred during handling and/or transportation of the samples. Sample locations and descriptions are summarized in Table 1, and a summary of the analytical results is included in Table 2. Reported injection well information and GPS coordinates showing boring locations are included in Table 3.

Laboratory Analyses

Fifteen soil samples, including one field duplicate, were submitted to SGS Environmental Services, Inc. with offices in Anchorage and Fairbanks, Alaska (SGS) using chain-of-custody procedures. The samples were hand-delivered to the project laboratory and were tested on a 3-day-rush turn-around basis to meet the submittal requirements. The project samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, semivolatile organic compounds (SVOCs) by EPA Method 8270D, and arsenic, cadmium, chromium, and lead by EPA Method 6000/7000. The six trip blanks were tested for VOCs. The analytical results are summarized in Tables 2, with the laboratory reports included in Attachment 1.

Investigation-Derived Waste

Investigation-derived waste (IDW) generated during the field activities consisted of decontamination water at the Homer site, polyethylene liners from the direct-push equipment, and disposable sampling supplies. The decontamination water at the Homer site was discharged to the ground surface at each associated boring location. Decontamination water was not generated at the Silvertip site because only one split-spoon sample was collected. Disposable sampling supplies were placed in garbage bags and disposed in a waste receptacle at the project sites.

Discussion of Results

A summary of the sample analytical results and ADEC's cleanup levels for the detected target analytes are included in Table 2. The referenced soil cleanup levels are based on the Oil and Other Hazardous Substances Pollution Control Regulations, 18 AAC 75, Method 2, Table B1 for the 'under 40 inches' precipitation zone. The laboratory reports are included in Attachment 1.

Arsenic and chromium concentrations reported in most of the samples are greater than the cleanup levels of 3.7 milligrams per kilogram (mg/kg) and 25 mg/kg, respectively. The remaining metals, cadmium and lead, were either not detected or were detected at concentrations less than the respective cleanup levels. Based on Table 3 in "Element Concentrations In Surficial Materials of Alaska" (USGS Professional Paper 1458, 1988), arsenic concentrations range from less than 10 mg/kg to 750 mg/kg and chromium levels are between 5 mg/kg and 390 mg/kg. Based on the referenced table and our experience in the project area, it is our opinion that the reported arsenic and chromium concentrations are generally within the naturally-occurring levels found in Alaska soils.

Quality Assurance Summary

The project laboratory, SGS, follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC and EPA data quality objectives (DQO). Internal laboratory quality controls for this project include surrogates, method blanks, laboratory control sample/laboratory control sample duplicates (LCS/LCSD), matrix spike/matrix spike duplicates (MS/MSD), and sample duplicates. If a DQO was not met, the project laboratory provides a report specific note identifying the problem in the Case Narrative section of their Laboratory Analysis Report (See Attachment 1).

Shannon & Wilson reviewed the field data and SGS data deliverables for Work Orders 1103166, 1103184, 1103191, 1103918, 1103929, and 1103930 and completed the ADEC Laboratory Data Review Checklist for each work order. The laboratory reports and data review checklists are included in Attachment 1. In addition to the reporting limits for a number of VOC and SVOC compounds being greater than the cleanup criteria, the following non-conformances were noted:

Work Order 1103166

- MS/MSD recoveries for several SVOC compounds are biased high. The project sample results are considered unaffected because SVOCs were not detected in the associated project samples.

- Initial calibration verification (ICV) recoveries for dichlorodifluoromethane and vinyl chloride are biased high. However, these analytes were not detected in the project samples.

Work Order 1103184

- Continuing calibration verification (CCV) and/or ICV recoveries for chloromethane, vinyl chloride, and dichlorodifluoromethane are biased high. The project sample results are considered usable for the intended use of the data because these compounds were either not detected or their concentrations are less than the cleanup criteria.
- MS/MSD does not meet relative percent difference (RPD) and/or recovery criteria for chloroform and multiple SVOC compounds. The data is considered acceptable based on acceptable LCS accuracy and not detected subject analytes in the project samples.

Work Order 1103191

- Samples 17268-2B1S2 and 17268-7B1S2 were analyzed at a dilution due to matrix interference with internal standards, which resulted in elevated laboratory reporting limits. The results considered usable for the intended use of the data.
- 1,2,4-Trimethylbenzene was detected (0.0552 mg/kg) in the trip blank accompanying this work order. 1,2,4-Trimethylbenzene is not detected in the associated project samples or it is detected at greater than 10 times of the concentration reported in the trip blank. A 1,2,4-Trimethylbenzene concentration of 31.4 mg/kg was detected in one of the project samples. It appears that the project samples were not cross-contaminated with this analyte, although the trip blank was impacted.
- MS/MSD does not meet recovery and/or relative percent difference (RPD) criteria for multiple VOC and SVOC compounds. The data is considered acceptable based on acceptable LCS accuracy and not detected subject analytes in the project samples.
- CCV and/or ICV recoveries for chloromethane, dichlorodifluoromethane, and vinyl chloride are biased high. The project sample results are considered usable for the intended use of the data because these compounds were either not detected or their concentrations are less than the cleanup criteria.

Work Order 1103918

- MSD recovery for 1,1-dichloroethene and toluene is biased high. The analytical data is not affected because these analytes are not detected in the project samples.
- CCV and/or ICV recoveries for chloromethane, dichlorodifluoromethane, and vinyl chloride are biased high. The project sample results are considered usable for the intended use of the data because these compounds were either not detected or their concentrations are less than the cleanup criteria.

- MS/MSD recovery does not meet recovery for multiple SVOC compounds. The data is considered acceptable based on acceptable LCS accuracy and not detected subject analytes in the project samples.

Work Order 1103929 and 1103930

- MS/MSD recoveries for arsenic are outside of acceptance criteria; however, post-digestion spike was successful. The RPD for arsenic is accepted based on acceptable sample/duplicate RPD.
- MS/MSD does not meet RPD criteria for cis-1,2-dichloroethene and MSD recovery for cis-1,2-dichloroethene is biased high. This compound was not detected above the reporting limit in the associated samples. Therefore, data usability is not affected.
- CCV recoveries for VOC and SVOC compounds are biased high. The project sample results are considered usable for the intended use of the data because these compounds were not detected in the associated project samples.

External quality controls include field records, one field duplicate sample, and six trip blanks. Field logs and records were checked for completeness and accuracy, and no discrepancies were identified that would impact the reliability of the data. One field duplicate sample set, B1S2/B1S3, was evaluated for precision using RPD. The ADEC recommended RPD DQOs are 50 percent for soil analyses. The calculated precision values for the analytes reported both samples are within the recommended DQOs. Except for one analyte, 1,2,4-Trimethylbenzene, detected in one of the six trip blanks, VOC constituents were not detected in the trip blanks. 1,2,4-Trimethylbenzene is not detected in the associated project samples or it was detected at greater than 10 times of the concentration reported in the trip blank.

Based on this quality assurance summary, we find the project data to be complete and usable to support the soil sampling activities conducted at the project sites.

Closure/Limitations

This report was prepared for the exclusive use of our client and their representatives. The findings we have presented within this report are based on the limited research, sampling, and analyses that we conducted. They should not be construed as definite conclusions regarding the project site's soil or groundwater quality. It is possible that our subsurface tests missed higher levels of petroleum hydrocarbon constituents, although our intention was to sample areas likely to be impacted. As a result, the sampling and analyses performed can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson. The data presented in this report should be considered representative of the time of our site assessment. Changes in site conditions can occur over time, due to natural forces or human

activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised. Shannon & Wilson has prepared the document in Attachment 2, Important Information About Your Geotechnical/Environmental Report, to assist you and others in understanding the use and limitations of our reports.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore has not, and will not, disclose the results of this study unless authorized by you or required by law.

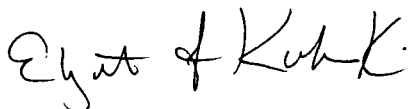
Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report please contact the undersigned.

We appreciate this opportunity to be of service and your confidence in our firm. If you have questions or comments concerning this submittal, please call Mr. Stafford Glashan, P.E. or the undersigned at (907) 561-2120.

Sincerely,

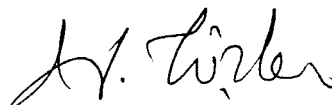
SHANNON & WILSON, INC.

Prepared By:



Elizabeth A Karcheski
Geologist III

Reviewed By:



Haydar Turker
Principal Engineering Geologist

Enc: Tables 1, 2, and 3
Figures 1 through 11
Attachments 1 and 2

TABLE 1 - SAMPLE LOCATIONS AND DESCRIPTIONS

| Sample Number | Date | Sample Location (See Figures 1 through 11) | Depth (feet bgs) | Headspace (ppm)^ | Sample Classification** |
|-------------------|-----------|---|---------------------|---------------------|--------------------------------------|
| Silvertip | | | | | |
| 17368-1 B1S1 | 6/30/2010 | Boring B1, Sample 1 | 5-7 | 1.1 | Brown, silty, sandy GRAVEL; moist |
| * 17368-1 B1S2 | 6/30/2010 | Boring B1, Sample 2 | 8-10 | 0.5 | Brown, silty, sandy GRAVEL; moist |
| * 17368-1 B1S3 | 6/30/2010 | Duplicate of 17368-1 B1S2 | 8-10 | 0.5 | Brown, silty, sandy GRAVEL; moist |
| Chulitna | | | | | |
| 17368-2 B1S1 | 6/29/2010 | Boring B1, Sample 1 | 10-13 | 100 | Brown, sandy SILT; moist |
| * 17368-2 B1S2 | 6/29/2010 | Boring B1, Sample 2 | 13-15 | 140 | Gray, sandy GRAVEL; moist |
| 17368-2 B1S3 | 6/29/2010 | Boring B1, Sample 3 | 15-17 | 110 | Gray, sandy GRAVEL; moist |
| 17368-2 B2S1 | 6/29/2010 | Boring B2, Sample 1 | 5-7.5 | 1.8 | Brown, silty, sandy GRAVEL; moist |
| 17368-2 B2S2 | 6/29/2010 | Boring B2, Sample 2 | 16-18 | 5.1 | Black, silty, sandy GRAVEL; moist |
| * 17368-2 B2S3 | 6/29/2010 | Boring B2, Sample 3 | 18-20 | 6.3 | Brown, silty, sandy GRAVEL; moist |
| Homer | | | | | |
| 17368-3-B1S1 | 6/30/2010 | Boring B1, Sample 1 | 4-6 | 0.4 | Brown SAND; moist |
| * 17368-3-B1S2 | 6/30/2010 | Boring B1, Sample 2 | 7-9 | 78 | Brown SILT; wet |
| 17368-3-B1S3 | 6/30/2010 | Boring B1, Sample 3 | 9-11 | 11 | Brown SILT; wet |
| 17368-3-B2S1 | 6/30/2010 | Boring B2, Sample 1 | 2.5-4.5 | 0.1 | Brown SILT; moist |
| * 17368-3-B2S2 | 6/30/2010 | Boring B2, Sample 2 | 4.5-6.5 | 1.3 | Brown SILT; moist |
| 17368-3-B2S3 | 6/30/2010 | Boring B2, Sample 3 | 6.5-8.5 | 0.2 | Brown SILT; moist |
| Birch Lake | | | | | |
| BL-1 | 7/1/2010 | Boring Birch 1, Sample 1 | 2.5-4 | 0.0 | Brown, silty, sandy GRAVEL; moist |
| * BL-2^^ | 7/1/2010 | Boring Birch 1, Sample 2 | 5-6.5 | 4.2 | Brown, silty, sandy GRAVEL; moist |
| BL-3 | 7/1/2010 | Boring Birch 1, Sample 3 | 7.5-9 | 0.5 | Brown, sandy, gravelly SILT; moist |
| BL-4 | 7/1/2010 | Boring Birch 1, Sample 4 | 10-11.5 | 0.1 | Brown, sandy, gravelly SILT; moist |
| BL-5 | 7/1/2010 | Boring Birch 1, Sample 5 | 12.5-14 | 0.0 | Brown, sandy, gravelly SILT; moist |
| BL-6 | 7/1/2010 | Boring Birch 1, Sample 6 | 15-16.5 | 0.0 | Brown to tan SILT, trace sand; moist |
| BL-7 | 7/1/2010 | Boring Birch 1, Sample 7 | 17.5-19 | 0.2 | Brown to tan SILT, trace sand; moist |

KEY DESCRIPTION

| | |
|-----|---|
| * | Sample analyzed by the project laboratory (See Table 2) |
| ^ | Field screening instrument was a Thermo Environmental Instruments 580B photoionization detector (PID) |
| ^^ | Analytical sample identification was "7368-070110-BIRCH 1" |
| ** | Sample classification applies to the portion of the specified sample interval from which the sample was collected |
| - | Measurement not recorded or not applicable |
| bgs | Below ground surface |
| ppm | Parts per million |

TABLE 1 - SAMPLE LOCATIONS AND DESCRIPTIONS

| Sample Number | Date | Sample Location (See Figures 1 through 11) | Depth (feet bgs) | Headspace (ppm)^ | Sample Classification** |
|-------------------|-----------|---|---------------------|---------------------|---|
| Birch Lake | | | | | |
| BL2-1 | 7/1/2010 | Boring Birch 2, Sample 1 | 2.5-4 | 0.0 | Light brown, silty, sandy crushed GRAVEL; moist |
| BL2-2 | 7/1/2010 | Boring Birch 2, Sample 2 | 5-6.5 | 0.0 | Brown, sandy, gravelly SILT; moist |
| BL2-3 | 7/1/2010 | Boring Birch 2, Sample 3 | 7.5-9 | 0.0 | Brown, sandy, gravelly SILT; moist |
| BL2-4 | 7/1/2010 | Boring Birch 2, Sample 4 | 10-11.5 | 0.4 | Brown, sandy, silty GRAVEL; moist |
| * BL2-5^^ | 7/1/2010 | Boring Birch 2, Sample 5 | 12.5-14 | 27 | Brown, sandy, silty GRAVEL; moist |
| BL2-6 | 7/1/2010 | Boring Birch 2, Sample 6 | 15-16.5 | 5.7 | Brown, sandy, silty GRAVEL; moist |
| BL2-7 | 7/1/2010 | Boring Birch 2, Sample 7 | 17.5-19 | 0.1 | Brown, sandy, silty GRAVEL; moist |
| Nelchina | | | | | |
| 17368-5 B1S1 | 6/29/2010 | Boring B1, Sample 1 | 5-7 | 0.4 | Gray, gravelly SILT; moist |
| 17368-5 B1S2 | 6/29/2010 | Boring B1, Sample 2 | 7-9 | 0.4 | Gray, silty, sandy GRAVEL; moist; occasional organics |
| 17368-5 B1S3 | 6/29/2010 | Boring B1, Sample 3 | 9-10 | 0.2 | Gray, silty, sandy GRAVEL; moist |
| * 17368-5 B1S4 | 6/29/2010 | Boring B1, Sample 4 | 10-11 | 1.8 | Gray, silty, sandy GRAVEL; moist |
| 17368-5 B1S5 | 6/29/2010 | Boring B1, Sample 5 | 11-13 | 2.0 | Gray, silty, sandy GRAVEL; moist |
| Cantwell | | | | | |
| 17368-6 B1S1 | 6/29/2010 | Boring B1, Sample 1 | 5-7.5 | 1.4 | Brown, sandy GRAVEL; moist |
| * 17368-6 B1S2 | 6/29/2010 | Boring B1, Sample 2 | 7.5-10 | 1.8 | Brown, sandy GRAVEL; moist |
| 17368-6 B1S3 | 6/29/2010 | Boring B1, Sample 3 | 10-12.5 | 0.2 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-6 B1S4 | 6/29/2010 | Boring B1, Sample 4 | 12.5-15 | 0.4 | Brown, slightly silty GRAVEL; moist |
| 17368-6 B2S1 | 6/29/2010 | Boring B2, Sample 1 | 5-7.5 | 0.3 | Brown, sandy, silty GRAVEL; moist |
| 17368-6 B2S2 | 6/29/2010 | Boring B2, Sample 2 | 7.5-10 | 0.0 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-6 B2S3 | 6/29/2010 | Boring B2, Sample 3 | 10-12.5 | 0.0 | Brown, slightly silty, sandy GRAVEL; moist |
| * 17368-6 B2S4 | 6/29/2010 | Boring B2, Sample 4 | 12.5-15 | 1.1 | Gray, slightly silty SAND, moist |
| Healy | | | | | |
| 17368-7 B1S1 | 6/30/2010 | Boring B1, Sample 1 | 10-12.5 | 1.0 | Brown, sandy GRAVEL; moist |
| * 17368-7 B1S2 | 6/30/2010 | Boring B1, Sample 2 | 15-17.5 | 860 | Black, silty, sandy GRAVEL; moist |
| 17368-7 B1S3 | 6/30/2010 | Boring B1, Sample 3 | 17.5-20 | 12 | Tan SAND; moist |
| 17368-7 B1S4 | 6/30/2010 | Boring B1, Sample 4 | 20-22.5 | 2.1 | Tan SAND to gravelly SAND; moist |
| 17368-7 B1S5 | 6/30/2010 | Boring B1, Sample 5 | 22.5-25 | 2.1 | Tan, slightly silty SAND; moist |

KEY DESCRIPTION

- * Sample analyzed by the project laboratory (See Table 2)
- ^ Field screening instrument was a Thermo Environmental Instruments 580B photoionization detector (PID)
- ^^ Analytical sample identification was "7368-070110-BIRCH 2"
- ** Sample classification applies to the portion of the specified sample interval from which the sample was collected
- Measurement not recorded or not applicable
- bgs Below ground surface
- ppm Parts per million

TABLE 1 - SAMPLE LOCATIONS AND DESCRIPTIONS

| Sample Number | Date | Sample Location (See Figures 1 through 11) | Depth (feet bgs) | Headspace (ppm)^ | Sample Classification** |
|-----------------|-----------|---|---------------------|---------------------|---|
| Trims | | | | | |
| TR-1 | 6/30/2010 | Boring Trims 1, Sample 1 | 2.5-4 | 0.0 | Reddish rust to tan mottled, sandy SILT; moist; occassional gravel |
| TR-2 | 6/30/2010 | Boring Trims 1, Sample 2 | 5-6.5 | 0.3 | Brownish gray, sandy GRAVEL, trace silt; dry to moist; with cobbles |
| TR-3 | 6/30/2010 | Boring Trims 1, Sample 3 | 7.5-9 | 0.5 | Brownish gray, sandy GRAVEL, trace silt; dry to moist; with cobbles |
| * TR-4^^ | 6/30/2010 | Boring Trims 1, Sample 4 | 10-11.5 | 1.2 | Brownish gray, sandy GRAVEL, trace silt; dry to moist; with cobbles |
| TR-5 | 6/30/2010 | Boring Trims 1, Sample 5 | 12.5-14 | 0.0 | Brownish gray, sandy GRAVEL, trace silt; dry to moist; with cobbles |
| TR-6 | 6/30/2010 | Boring Trims 1, Sample 6 | 15-16.5 | - | No recovery |
| Slana | | | | | |
| 17368-9 B1S1 | 6/29/2010 | Boring B1, Sample 1 | 5-7 | 0.1 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-9 B1S2 | 6/29/2010 | Boring B1, Sample 2 | 7-9 | 0.1 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-9 B1S3 | 6/29/2010 | Boring B1, Sample 3 | 9-10 | 0.7 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-9 B1S4 | 6/29/2010 | Boring B1, Sample 4 | 10-11 | 1.1 | Brown, slightly silty, sandy GRAVEL; moist |
| * 17368-9 B1S5 | 6/29/2010 | Boring B1, Sample 5 | 11-13 | 0.6 | Brown, slightly silty, sandy GRAVEL; moist |
| 17368-9 B1S6 | 6/29/2010 | Boring B1, Sample 6 | 13-15 | 0.4 | Brown, slightly silty, sandy GRAVEL; moist |
| Coldfoot | | | | | |
| CF-1 | 6/29/2010 | Boring Coldfoot 1, Sample 1 | 2.5-4.5 | 0.0 | Dark brown, slightly sandy, organic SILT, trace gravel; moist |
| CF-2 | 6/29/2010 | Boring Coldfoot 1, Sample 2 | 5-7 | 0.0 | Dark brown, silty, sandy GRAVEL; moist |
| CF-3 | 6/29/2010 | Boring Coldfoot 1, Sample 3 | 7.5-9.5 | 0.0 | Dark brown, slightly silty, sandy GRAVEL; wet |
| * CF-4^^^ | 6/29/2010 | Boring Coldfoot 1, Sample 4 | 10-12 | 0.0 | Brown, slightly silty, sandy GRAVEL; wet |
| CF-5 | 6/29/2010 | Boring Coldfoot 1, Sample 5 | 12.5-14.5 | 0.0 | Brown to rusty brown, slightly silty, sandy GRAVEL; wet |
| CF-6 | 6/29/2010 | Boring Coldfoot 1, Sample 6 | 15-17 | 0.0 | Brown to rusty brown, slightly silty, sandy GRAVEL; wet |
| CF-7 | 6/29/2010 | Boring Coldfoot 1, Sample 7 | 17.5-19.5 | 0.0 | Brown to rusty brown, slightly silty, sandy GRAVEL; wet |
| CF-8 | 6/29/2010 | Boring Coldfoot 1, Sample 8 | 20-21.5 | 0.0 | Brown to rust, slightly silty, sandy GRAVEL; wet |

KEY DESCRIPTION

| | |
|-----|---|
| * | Sample analyzed by the project laboratory (See Table 2) |
| ^ | Field screening instrument was a Thermo Environmental Instruments 580B photoionization detector (PID) |
| ^^ | Analytical sample identification was "7368-063010-TRIMS" |
| ^^^ | Analytical sample identification was "7368-062910-CF" |
| ** | Sample classification applies to the portion of the specified sample interval from which the sample was collected |
| - | Measurement not recorded or not applicable |
| bgs | Below ground surface |
| ppm | Parts per million |

TABLE 1 - SAMPLE LOCATIONS AND DESCRIPTIONS

| Sample Number | Date | Sample Location (See Figures 1 through 11) | Depth (feet bgs) | Headspace (ppm)^ | Sample Classification** |
|--------------------------------|-----------|--|---------------------|---------------------|---|
| Quality Control Samples | | | | | |
| * 17368-2TB | 6/29/2010 | Soil trip blank for Chulitna, Cantwell, and Healy samples | - | - | Ottawa sand with methanol added in the laboratory |
| * 17368-3-STB | 6/30/2010 | Soil trip blank for Homer samples | - | - | Ottawa sand with methanol added in the laboratory |
| * 17368-5-TB | 6/29/2010 | Soil trip blank for Silvertip, Nelchina, and Slana samples | - | - | Ottawa sand with methanol added in the laboratory |
| * Trip Blank | 6/29/2010 | Soil trip blank for Coldfoot sample | - | - | Ottawa sand with methanol added in the laboratory |
| * Trip Blank | 6/30/2010 | Soil trip blank for Trims sample | - | - | Ottawa sand with methanol added in the laboratory |
| * Trip Blank | 7/1/2010 | Soil trip blank for Birch Lake samples | - | - | Ottawa sand with methanol added in the laboratory |

| KEY | DESCRIPTION |
|-----|-------------|
|-----|-------------|

| | |
|-----|---|
| * | Sample analyzed by the project laboratory (See Table 2) |
| ** | Sample classification applies to the portion of the specified sample interval from which the sample was collected |
| - | Measurement not recorded or not applicable |
| bgs | Below ground surface |
| ppm | Parts per million |

TABLE 2 - SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level** | Sample Source, ID Number^, and Collection Depth in Feet (See Table 1) | | | | |
|--|------------|-----------------|--|--------------------------|--------------------------|--------------------------|-------------------------|
| | | | Silvertip | | Chulitna | | Homer |
| | | | 17368-1 B1S2 8-10 | 17368-1 B1S3~ 8-10 | 17368-2 B1S2 13-15 | 17368-2 B2S3 18-20 | 17368-3- B1S2 7-9 |
| Headspace Reading - ppm | 580B PID | - | 0.5 | 0.5 | 140 | 6.3 | 78 |
| Percent Solids - percent | SM20 2540G | - | 94.1 | 92.9 | 93.7 | 87.9 | 65.0 |
| Metals | | | | | | | |
| Arsenic - mg/kg | EPA 6020 | 3.9 | 9.21 | 12.8 | 9.95 | 11.4 | 7.72 |
| Cadmium - mg/kg | EPA 6020 | 5 | <0.210 | <0.209 | 0.250 | <0.227 | <0.291 |
| Chromium - mg/kg | EPA 6020 | 25 | 41.5 | 47.3 | 37.3 | 40.7 | 26.5 |
| Lead - mg/kg | EPA 6020 | 400 | 11.5 | 10.3 | 7.16 | 5.17 | 6.93 |
| Volatile Organic Compounds (VOC) | | | | | | | |
| Benzene - mg/kg | EPA 8260B | 0.025 | <0.0107 | <0.0171 | 0.0178 | <0.0131 | <0.0298 |
| n-Butylbenzene - mg/kg | EPA 8260B | 15 | <0.0214 | <0.0343 | 0.523 | <0.0263 | <0.0596 |
| sec-Butylbenzene - mg/kg | EPA 8260B | 12 | <0.0214 | <0.0343 | 0.422 | <0.0263 | <0.0596 |
| tert-Butylbenzene - mg/kg | EPA 8260B | 12 | <0.0214 | <0.0343 | 0.0354 | <0.0263 | <0.0596 |
| 1,4-Dichlorobenzene - mg/kg | EPA 8260B | 0.64 | <0.0214 | <0.0343 | <0.0248 | 0.0281 | <0.0596 |
| Dichlorodifluoromethane - mg/kg | EPA 8260B | 60 | <0.0214 | <0.0343 | <0.0248 | <0.0263 | 0.230 |
| Ethylbenzene - mg/kg | EPA 8260B | 6.9 | <0.0214 | <0.0343 | 0.150 | <0.0263 | <0.0596 |
| Isopropylbenzene (Cumene) - mg/kg | EPA 8260B | 51 | <0.0214 | <0.0343 | 0.174 | <0.0263 | <0.0596 |
| 4-Isopropyltoluene - mg/kg | EPA 8260B | - | <0.0214 | <0.0343 | 0.455 | 0.140 | 0.193 |
| Naphthalene - mg/kg | EPA 8260B | 20 | <0.0429 | <0.0686 | 0.830 | <0.0526 | <0.119 |
| n-Propylbenzene - mg/kg | EPA 8260B | 15 | <0.0214 | <0.0343 | 0.412 | <0.0263 | <0.0596 |
| Toluene - mg/kg | EPA 8260B | 6.5 | <0.0214 | <0.0343 | 0.550 | <0.0263 | <0.0596 |
| Trichloroethene - mg/kg | EPA 8260B | 0.02 | <0.0214 | <0.0343 | <0.0248 | <0.0263 | 0.0626 |
| 1,2,4-Trimethylbenzene - mg/kg | EPA 8260B | 23 | <0.0214 | <0.0343 | 3.17 | <0.0263 | <0.0596 |
| 1,3,5-Trimethylbenzene - mg/kg | EPA 8260B | 23 | <0.0214 | <0.0343 | 1.51 | <0.0263 | <0.0596 |
| Xylenes - mg/kg | EPA 8260B | 63 | <0.0643 | <0.103 | 1.44 | <0.0789 | <0.179 |
| Other VOCs | EPA 8260B | various | ND | ND | ND | ND | ND |
| Semi-Volatile Organic Compounds (SVOC) | | | | | | | |
| bis(2-Ethylhexyl)phthalate - mg/kg | EPA 8270D | 13 | 0.346 | <0.265 | <5.26 | <0.281 | <0.382 |
| 2-Methylnaphthalene - mg/kg | EPA 8270D | 6.1 | <0.262 | <0.265 | 8.67 | <0.281 | <0.382 |
| Other SVOCs | EPA 8270D | various | ND | ND | ND | ND | ND |

KEY DESCRIPTION

| | |
|-------------------|---|
| * | See Attachment 2 for compounds tested, methods, and laboratory reporting limits |
| ** | Soil cleanup level is the most stringent standard listed in Table B1, 18 AAC 75, for the under 40 inches (precipitation) zone" (October 2008) |
| ~ | Duplicate of 17368-1 B1S2 |
| 9.21 | Result exceeds cleanup level |
| <0.0298 | Reporting limit exceeds cleanup level |
| <0.210 | Analyte not detected; laboratory reporting limit of 0.210 mg/kg |
| 11.5 | Analyte detected |
| - | Not applicable or sample not tested for this analyte |
| ppm | Parts per million |
| mg/kg | Milligram per kilogram |
| ND | Not detected |

TABLE 2 - SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level** | Sample Source, ID Number^, and Collection Depth in Feet (See Table 1) | | | | |
|--|------------|-----------------|---|----------------------------|-------------------------------|--------------------------|---------------------------|
| | | | Homer | Birch Lake | | Nelchina | Cantwell |
| | | | 17368-3-B2S2 4.5-6.5 | (Birch 1) BL-2 5-6.5 | (Birch 2) BL2-5 12.5-14 | 17368-5 B1S4 10-11 | 17368-6 B1S2 7.5-10 |
| Headspace Reading - ppm | 580B PID | - | 1.3 | 4.2 | 27 | 1.8 | 1.8 |
| Percent Solids - percent | SM20 2540G | - | 78.6 | 90.4 | 94.5 | 95.7 | 96.3 |
| Metals | | | | | | | |
| Arsenic - mg/kg | EPA 6020 | 3.9 | 9.98 | 7.06 | 2.73 | 8.59 | 7.82 |
| Cadmium - mg/kg | EPA 6020 | 5 | <0.248 | <0.209 | 0.399 | <0.192 | 0.268 |
| Chromium - mg/kg | EPA 6020 | 25 | 28.5 | 11.7 | 6.66 | 31.2 | 37.8 |
| Lead - mg/kg | EPA 6020 | 400 | 7.77 | 13.2 | 6.32 | 5.41 | 5.30 |
| Volatile Organic Compounds (VOC) | | | | | | | |
| Chloroform - mg/kg | EPA 8260B | 0.46 | <0.428 | <0.0331 | <0.0183 | <0.0156 | 0.0504 |
| 1,3-Dichlorobenzene - mg/kg | EPA 8260B | 28 | <0.0535 | <0.0331 | 0.0575 | <0.0156 | <0.0265 |
| Tetrachloroethene - mg/kg | EPA 8260B | 0.024 | <0.0535 | <0.0331 | 0.0239 | <0.0156 | <0.0265 |
| 1,2,3-Trichlorobenzene - mg/kg | EPA 8260B | - | <0.0535 | <0.0331 | 0.0215 | <0.0156 | <0.0265 |
| 1,2,4-Trichlorobenzene - mg/kg | EPA 8260B | 0.85 | <0.0535 | <0.0331 | 0.0464 | <0.0156 | <0.0265 |
| Other VOCs | EPA 8260B | various | ND | ND | ND | ND | ND |
| Semi-Volatile Organic Compounds (SVOC) | | | | | | | |
| SVOCs | EPA 8270D | various | ND | ND | ND | ND | ND |

KEY DESCRIPTION

| | |
|-------------------|---|
| * | See Attachment 2 for compounds tested, methods, and laboratory reporting limits |
| ** | Soil cleanup level is the most stringent standard listed in Table B1, 18 AAC 75, for the under 40 inches (precipitation) zone" (October 2008) |
| 9.98 | Result exceeds cleanup level |
| <0.0535 | Reporting limit exceeds cleanup level |
| <0.248 | Analyte not detected; laboratory reporting limit of 0.248 mg/kg |
| 7.77 | Analyte detected |
| - | Not applicable or sample not tested for this analyte |
| ppm | Parts per million |
| mg/kg | Milligram per kilogram |
| ND | Not detected |

TABLE 2 - SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level** | Sample Source, ID Number [^] , and Collection Depth in Feet (See Table 1) | | | | |
|--|------------|-----------------|--|----------------------------|-----------------|--------------------------|-----------------|
| | | | Cantwell | Healy | Trims | Slana | Coldfoot |
| | | | 17368-6 B2S4 12.5-15 | 17368-7 B1S2 15-17.5 | TR-4 10-11.5 | 17368-9 B1S5 11-13 | CF-4 10-12 |
| Headspace Reading - ppm | 580B PID | - | 1.1 | 860 | 1.2 | 0.6 | 0.0 |
| Percent Solids - percent | SM20 2540G | - | 84.1 | 76.1 | 94.5 | 94.7 | 86.9 |
| Metals | | | | | | | |
| Arsenic - mg/kg | EPA 6020 | 3.9 | 12.2 | 6.65 | 57.1 | 3.84 | 4.40 |
| Cadmium - mg/kg | EPA 6020 | 5 | 0.326 | <0.243 | <0.206 | 0.256 | <0.217 |
| Chromium - mg/kg | EPA 6020 | 25 | 37.7 | 13.4 | 11.1 | 15.8 | 12.1 |
| Lead - mg/kg | EPA 6020 | 400 | 6.28 | 16.8 | 9.99 | 4.16 | 5.96 |
| Volatile Organic Compounds (VOC) | | | | | | | |
| Benzene - mg/kg | EPA 8260B | 0.025 | <0.0169 | 0.0523 | <0.0116 | <0.00699 | <0.0114 |
| n-Butylbenzene - mg/kg | EPA 8260B | 15 | <0.0337 | 1.25 | <0.0231 | <0.0140 | <0.0229 |
| sec-Butylbenzene - mg/kg | EPA 8260B | 12 | <0.0337 | 1.07 | <0.0231 | <0.0140 | <0.0229 |
| tert-Butylbenzene - mg/kg | EPA 8260B | 12 | <0.0337 | 0.0971 | <0.0231 | <0.0140 | <0.0229 |
| 1,2-Dichlorobenzene - mg/kg | EPA 8260B | 5.1 | <0.0337 | 12.0 | <0.0231 | <0.0140 | <0.0229 |
| 1,3-Dichlorobenzene - mg/kg | EPA 8260B | 28 | <0.0337 | 0.513 | <0.0231 | <0.0140 | <0.0229 |
| 1,4-Dichlorobenzene - mg/kg | EPA 8260B | 0.64 | <0.0337 | 1.68 | <0.0231 | <0.0140 | <0.0229 |
| cis-1,2-Dichloroethene - mg/kg | EPA 8260B | 0.24 | <0.0337 | 6.12 | <0.0231 | <0.0140 | <0.0229 |
| trans-1,2-Dichloroethene - mg/kg | EPA 8260B | 0.37 | <0.0337 | 0.0519 | <0.0231 | <0.0140 | <0.0229 |
| Ethylbenzene - mg/kg | EPA 8260B | 6.9 | <0.0337 | 1.71 | <0.0231 | <0.0140 | <0.0229 |
| Isopropylbenzene (Cumene) - mg/kg | EPA 8260B | 51 | <0.0337 | 1.22 | <0.0231 | <0.0140 | <0.0229 |
| 4-Isopropyltoluene - mg/kg | EPA 8260B | - | <0.0337 | 0.940 | <0.0231 | <0.0140 | <0.0229 |
| Naphthalene - mg/kg | EPA 8260B | 20 | <0.0675 | 13.7 | <0.0463 | <0.0280 | <0.0457 |
| n-Propylbenzene - mg/kg | EPA 8260B | 15 | <0.0337 | 2.32 | <0.0231 | <0.0140 | <0.0229 |
| Tetrachloroethene - mg/kg | EPA 8260B | 0.024 | <0.0337 | 2.46 | <0.0231 | <0.0140 | <0.0229 |
| Toluene - mg/kg | EPA 8260B | 6.5 | <0.0337 | 1.93 | <0.0231 | <0.0140 | <0.0229 |
| Trichloroethene - mg/kg | EPA 8260B | 0.02 | < 0.0337 | 0.295 | < 0.0231 | <0.0140 | < 0.0229 |
| 1,2,4-Trimethylbenzene - mg/kg | EPA 8260B | 23 | <0.0337 | 31.4 | <0.0231 | <0.0140 | <0.0229 |
| 1,3,5-Trimethylbenzene - mg/kg | EPA 8260B | 23 | <0.0337 | 10.0 | <0.0231 | <0.0140 | <0.0229 |
| Xylenes - mg/kg | EPA 8260B | 63 | <0.101 | 20.6 | <0.0694 | <0.0419 | <0.0686 |
| Other VOCs | EPA 8260B | various | ND | ND | ND | ND | ND |
| Semi-Volatile Organic Compounds (SVOC) | | | | | | | |
| bis(2-Ethylhexyl)phthalate - mg/kg | EPA 8270D | 13 | <0.296 | <6.48 | <0.263 | 1.43 | <0.286 |
| 2-Methylnaphthalene - mg/kg | EPA 8270D | 6.1 | <0.296 | 39.9 | <0.263 | <0.261 | <0.286 |
| Naphthalene - mg/kg | EPA 8270D | 20 | <0.296 | 9.15 | <0.263 | <0.261 | <0.286 |
| Other SVOCs | EPA 8270D | various | ND | ND | ND | ND | ND |

KEY DESCRIPTION

| | |
|-----------------|---|
| * | See Attachment 2 for compounds tested, methods, and laboratory reporting limits |
| ** | Soil cleanup level is the most stringent standard listed in Table B1, 18 AAC 75, for the under 40 inches (precipitation) zone" (October 2008) |
| 12.2 | Result exceeds cleanup level |
| <0.243 | Analyte not detected; laboratory reporting limit of 0.243 mg/kg |
| 3.84 | Analyte detected |
| < 0.0337 | Reporting limit exceeds cleanup level |
| - | Not applicable or sample not tested for this analyte |
| ppm | Parts per million |
| mg/kg | Milligram per kilogram |
| ND | Not detected |

TABLE 2 - SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level** | Sample Source, ID Number^, and Date of Collection (See Table 1) | | |
|----------------------------------|-----------|-----------------|---|------------------------------|-------------------------|
| | | | Quality Control Samples | | |
| | | | 17368-2TB 6/29/2010 | 17368-3- STB 6/30/2010 | 17368-5-TB 6/29/2010 |
| Volatile Organic Compounds (VOC) | | | | | |
| 1,2,4-Trimethylbenzene - mg/kg | EPA 8260B | 23 | 0.0552 | <0.0246 | <0.0290 |
| Other VOCs | EPA 8260B | various | ND | ND | ND |

| Parameter Tested | Method* | Cleanup Level** | Sample Source, ID Number^, and Date of Collection (See Table 1) | | |
|----------------------------------|-----------|-----------------|---|-------------------------|------------------------|
| | | | Quality Control Samples | | |
| | | | Trip Blank 6/29/2010 | Trip Blank 6/30/2010 | Trip Blank 7/1/2010 |
| Volatile Organic Compounds (VOC) | EPA 8260B | various | ND | ND | ND |

KEY DESCRIPTION

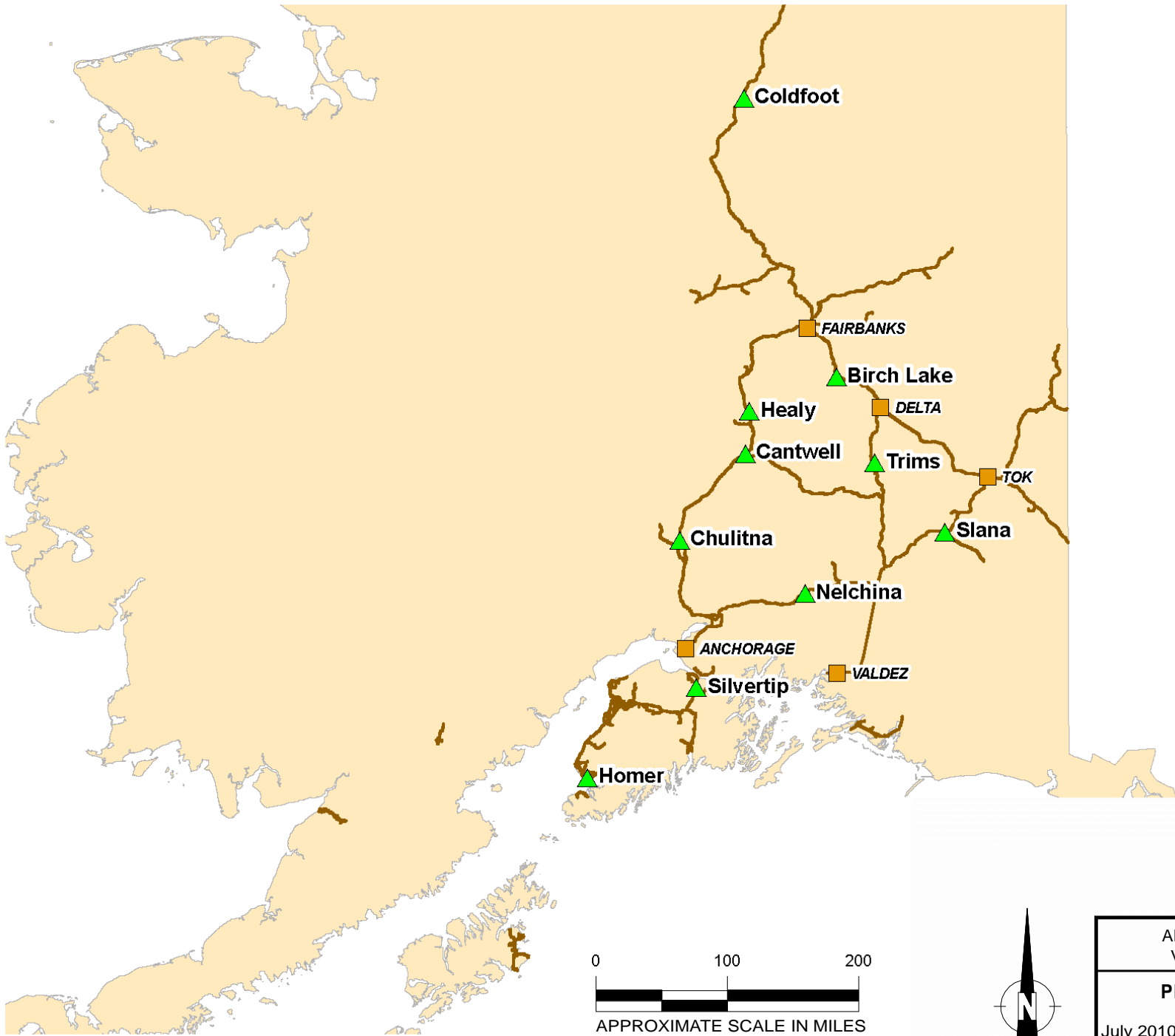
| | |
|---------------|---|
| * | See Attachment 2 for compounds tested, methods, and laboratory reporting limits |
| ** | Soil cleanup level is the most stringent standard listed in Table B1, 18 AAC 75, for the under 40 inches (precipitation) zone" (October 2008) |
| 0.0552 | Analyte detected |
| <0.0246 | Analyte not detected; laboratory reporting limit of 0.0246mg/kg |
| - | Not applicable or sample not tested for this analyte |
| mg/kg | Milligram per kilogram |
| ND | Not detected |

TABLE 3 - INJECTION WELL SAMPLING SUMMARY

SHANNON WILSON, INC.

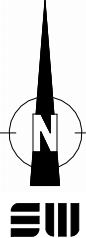
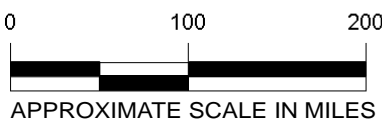
| Stations/Borings | Injection Well Discharge Depth* (feet bgs) | Well Construction Type* | Analytical Sample Depth (feet bgs) | Lattitude** | Longitude** |
|-----------------------------|--|-------------------------|------------------------------------|-------------|-------------|
| Silvertip Boring 1 | 8 | wood crib | 8-10 | N 60.78512 | W 149.42927 |
| Chultina Boring 1 | 12 | log crib | 13-15 | N 62.40494 | W 150.26103 |
| Chultina Boring 2 | 15 | log crib | 18-20 | N 62.40514 | W 150.26138 |
| Homer Boring 1 | 7 | mound | 7-9 | N 59.6598 | W 151.6428 |
| Homer Boring 2 ⁺ | 3 | open pipe | 4.5-6.5 | N 59.6595 | W 151.6431 |
| Birch Lake Boring 1 | 8 | culvert | 5-6.5 | N 64.31631 | W 146.68834 |
| Birch Lake Boring 2 | 8 | crib | 12.5-14 | N 64.31630 | W 146.68796 |
| Nelchina Boring 1 | 8 | log crib | 10-11 | N 61.98275 | W 146.84147 |
| Cantwell Boring 1 | 7-8 | crib | 7.5-10 | N 63.38930 | W 148.88441 |
| Cantwell Boring 2 | 7-8 | leach | 12.5-15 | N 63.38923 | W 148.88501 |
| Healy Boring 1 | Unknown (approximately 12.5 feet) | unknown (crib) | 15-17 | N 63.87069 | W 149.01303 |
| Trims Boring 1 | 10 | ABS piping | 10-11.5 | N 63.41602 | W 145.75084 |
| Slana Boring 1 | 12 | metal leach tank | 11-13 | N 62.70720 | W 143.97762 |
| Coldfoot Boring 1 | 8 | leach | 10-12 | N 67.25526 | W 150.18619 |

| KEY | DESCRIPTION |
|-----|---|
| * | Estimated by ADOT&PF |
| bgs | Below ground surface |
| ** | Lattitude and Longitude provided in WGS84 Datum |
| + | Discharge pipe approximately 3 feet below surrounding surface grade, in ditch |



LEGEND

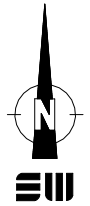
▲ Maintenance Station



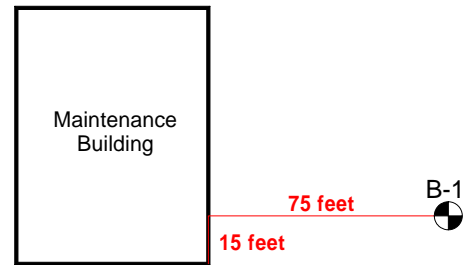
| | |
|--|---------------|
| ADOT&PF Maintenance Facilities Various Communities, Alaska | |
| PROJECT LOCATIONS MAP | |
| July 2010 | 32-1-17368 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 1 |



Boring B-1, looking North.



HOPE HIGHWAY



LEGEND



B-1

Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 30, 2010

ADOT&PF Maintenance Facility
Silvertip, Alaska

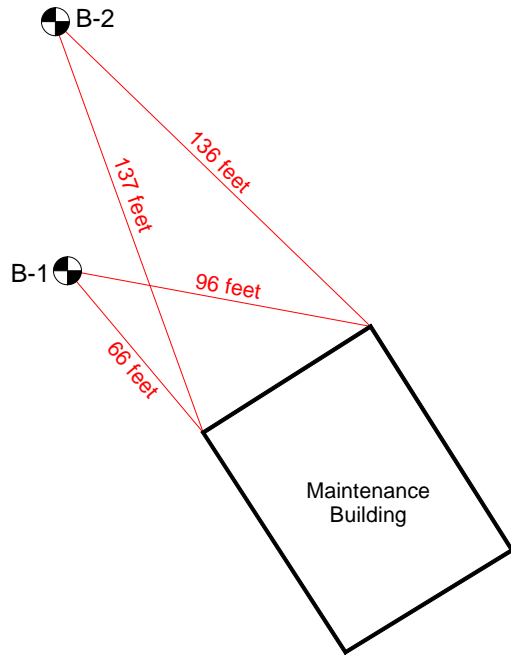
SILVERTIP STATION SITE PLAN

July 2010

32-1-17368

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

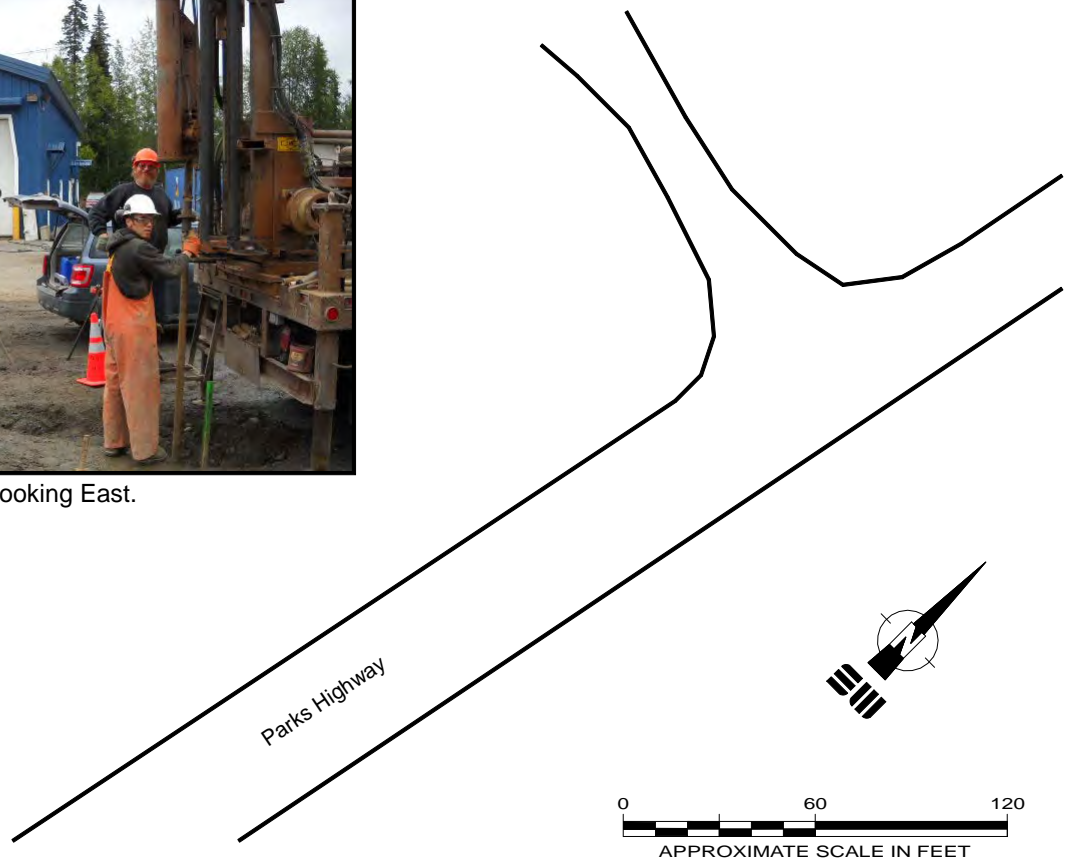
Fig. 2




Boring B-2, looking East.



Boring B-1, looking East.



LEGEND

 B-1 Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 29, 2010

ADOT&PF Maintenance Facility
Chulitna, Alaska

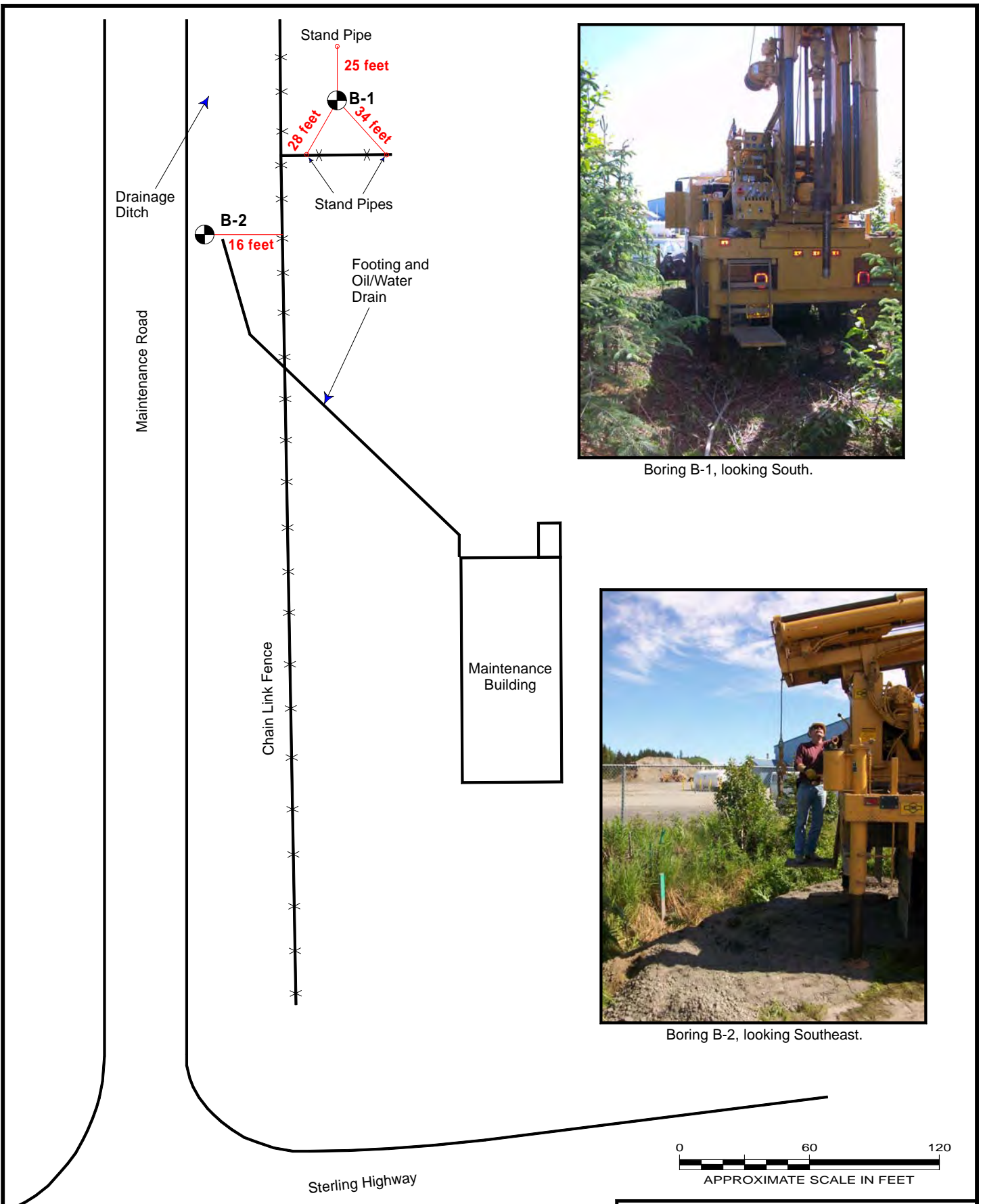
CHULITNA STATION SITE PLAN

July 2010

32-1-17368

 SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 3




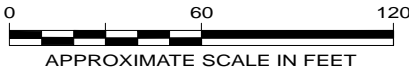
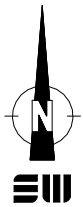
Boring B-1, looking South.



Boring B-2, looking Southeast.

LEGEND

 B-1 Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 30, 2010



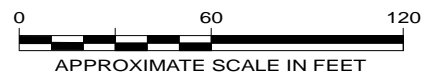
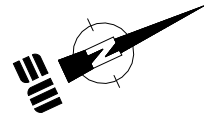
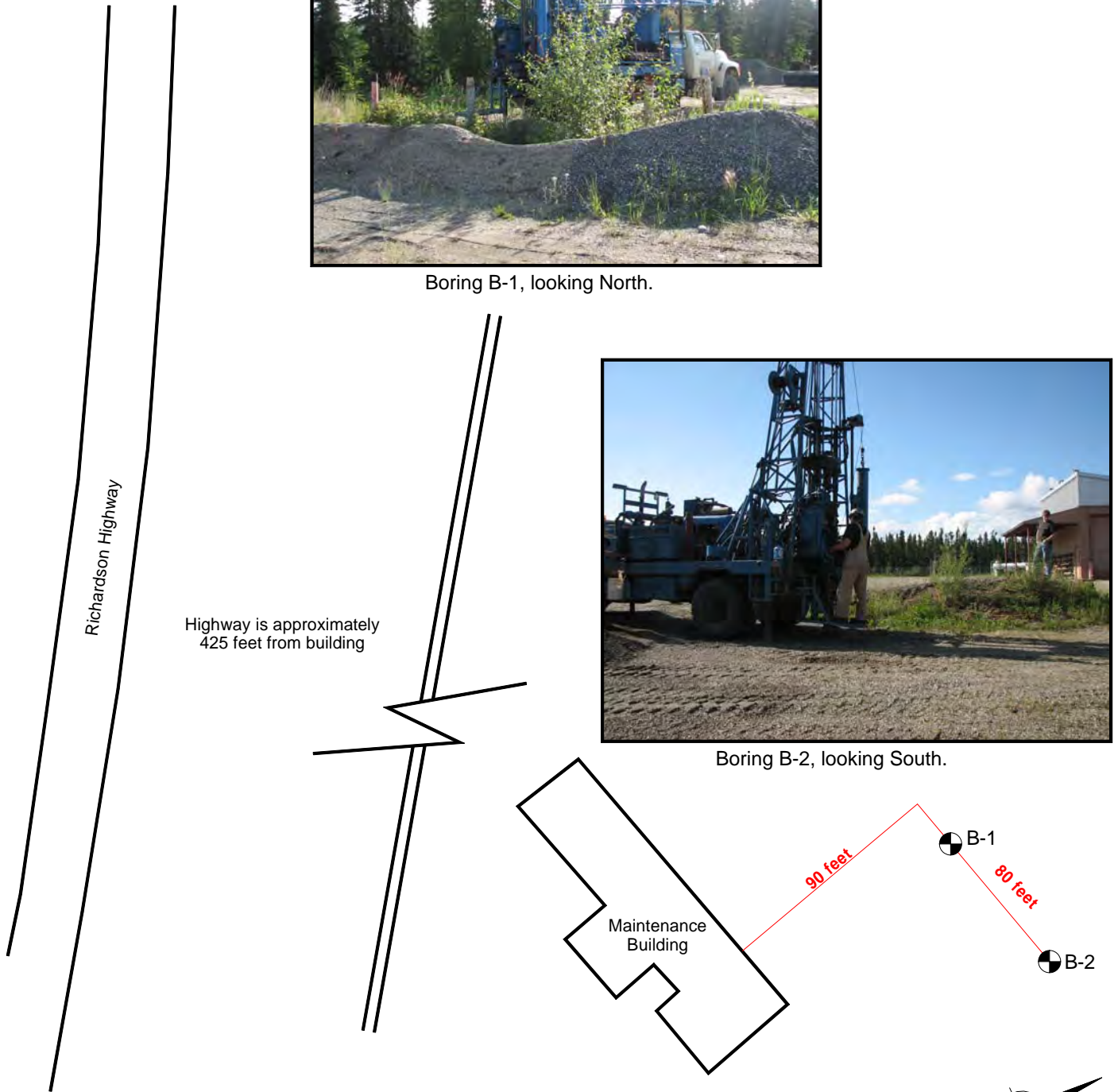
| | |
|--|---------------|
| ADOT&PF Maintenance Facility Homer, Alaska | |
| HOMER STATION SITE PLAN | |
| July 2010 | 32-1-17368 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 4 |



Boring B-1, looking North.



Boring B-2, looking South.



LEGEND



Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on July 1, 2010

ADOT&PF Maintenance Facility
Birch Lake, Alaska

BIRCH LAKE STATION SITE PLAN

July 2010

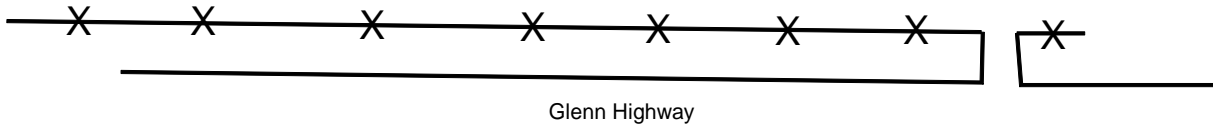
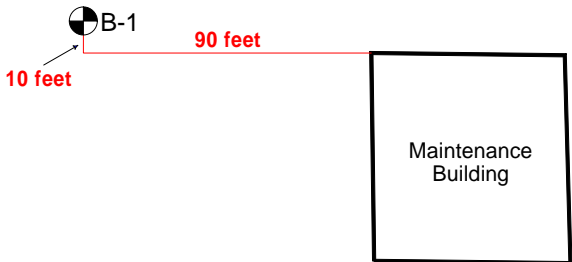
32-1-17368

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 5



Boring B-1, looking East.



LEGEND



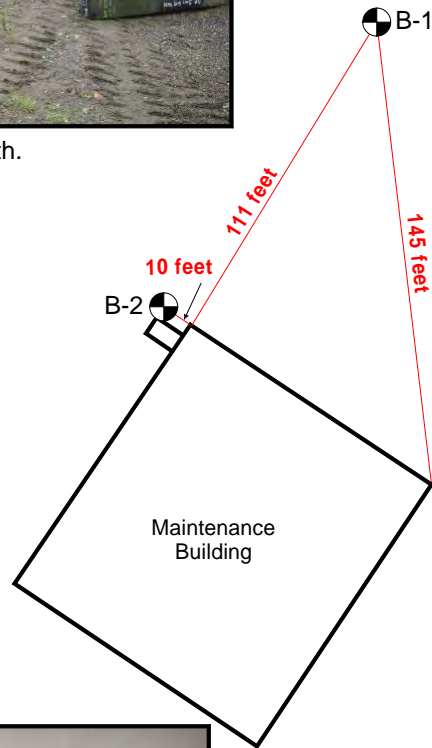
Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 29, 2010



| | |
|--|---------------|
| ADOT&PF Maintenance Facility Nelchina, Alaska | |
| NELCHINA STATION SITE PLAN | |
| July 2010 | 32-1-17368 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 6 |

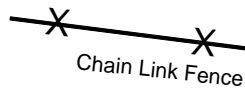


Boring B-1, looking South.




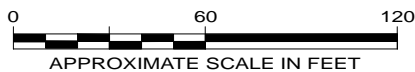
Boring B-2, looking Southeast.

Approximately 250 feet to Denali Highway



LEGEND

 Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 29, 2010



ADOT&PF Maintenance Facility
Cantwell, Alaska

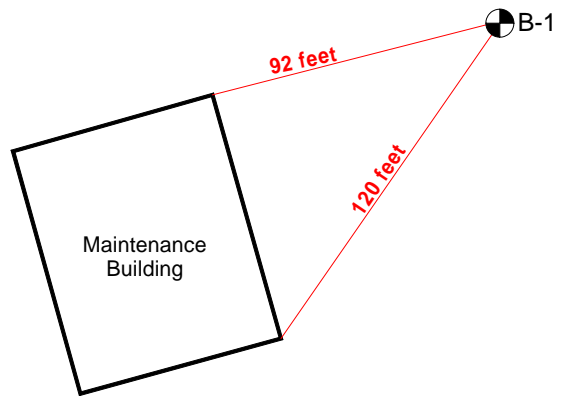
CANTWELL STATION SITE PLAN

July 2010

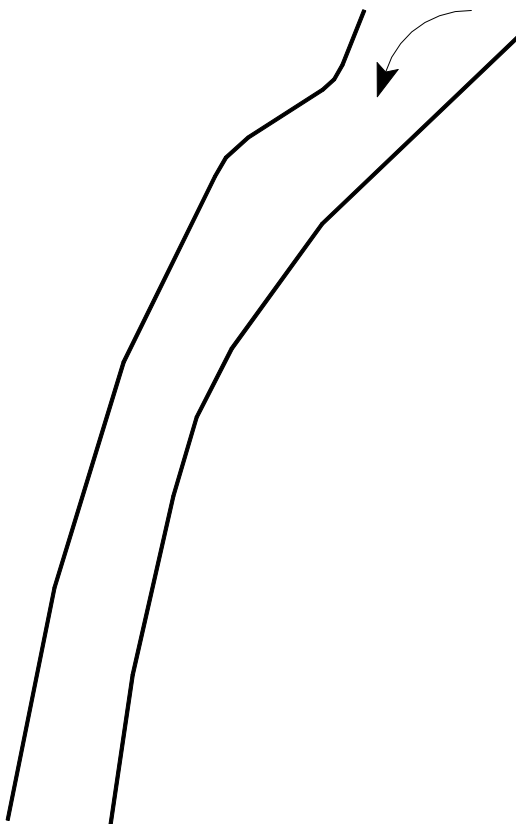
32-1-17368

 **SHANNON & WILSON, INC.**
Geotechnical & Environmental Consultants

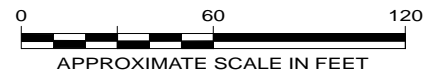
Fig. 7



Approximately 500 feet
to Healy Spurr Road



Boring B-1, looking West.



LEGEND



B-1

Approximate location of Boring B-1, advanced
by Shannon & Wilson, Inc. on June 30, 2010

ADOT&PF Maintenance Facility
Healy, Alaska

HEALY STATION SITE PLAN

July 2010

32-1-17368

 **SHANNON & WILSON, INC.**
Geotechnical & Environmental Consultants

Fig. 8

● B-1

65 feet



Boring B-1, looking Southeast

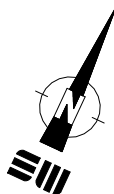
Richardson Highway



LEGEND



Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 30, 2010



ADOT&PF Maintenance Facility
Trims, Alaska

TRIMS STATION SITE PLAN

July 2010

32-1-17368

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

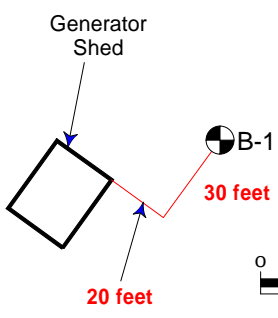
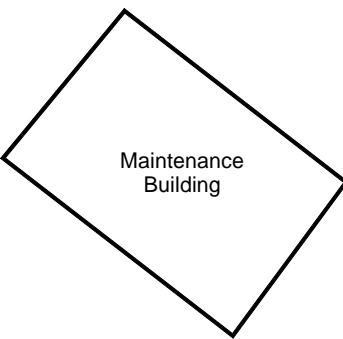
Fig. 9

Nabesna Road


State Road



Boring B-1, looking Northwest.



LEGEND

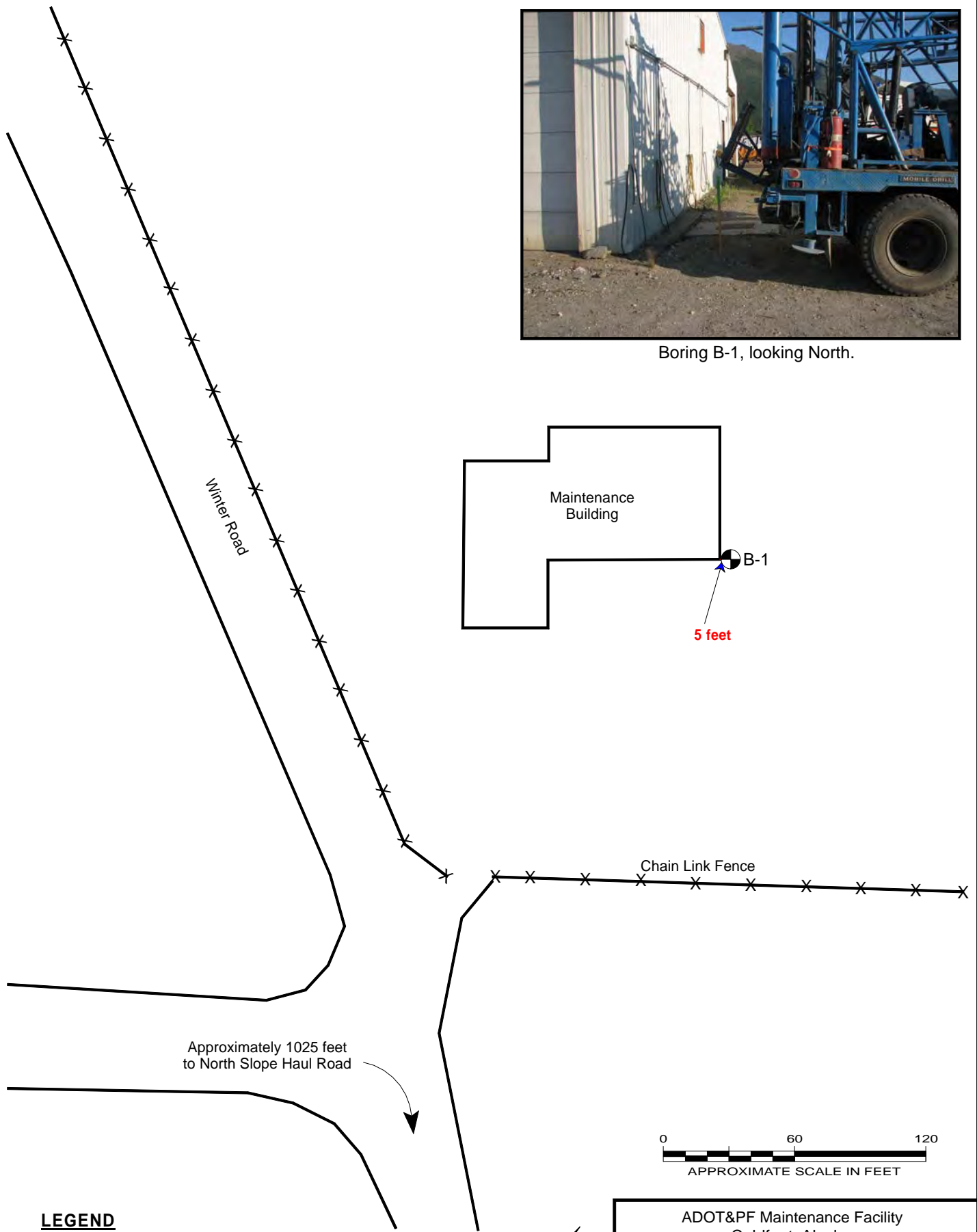
 Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 29, 2010



| | |
|---|----------------|
| ADOT&PF Maintenance Facility Slana, Alaska | |
| SLANA STATION SITE PLAN | |
| July 2010 | 32-1-17368 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 10 |



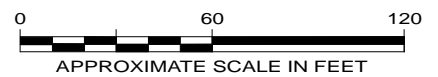
Boring B-1, looking North.




5 feet

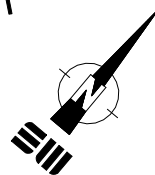
Chain Link Fence

Approximately 1025 feet to North Slope Haul Road



LEGEND

-  B-1 Approximate location of Boring B-1, advanced by Shannon & Wilson, Inc. on June 29, 2010



ADOT&PF Maintenance Facility
Coldfoot, Alaska

COLDFOOT STATION SITE PLAN

July 2010

32-1-17368

 **SHANNON & WILSON, INC.**
Geotechnical & Environmental Consultants

Fig. 11

ATTACHMENT 1

RESULTS OF ANALYTICAL TESTING BY

SGS ENVIRONMENTAL SERVICES OF ANCHORAGE, ALASKA

AND

ADEC LABORATORY DATA REVIEW CHECKLISTS



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 32-1-017368 AK DOT
Client: Shannon & Wilson, Inc.
SGS Work Order: 1103166

Released by:

Contents (Bookmarked in PDF):

Cover Page
Case Narrative
Sample Results Forms
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1103166 32-1-017368 AK DOT

Printed Date/Time 7/6/2010 16:50

Sample ID Client Sample ID

Refer to the sample receipt form for information on sample condition.

- 970657 * MS 17368-1 B1S2(1103166001MS)**
8270D - MS recovery for multiple analytes is outside of QC criteria (biased high). Refer to LCS for accuracy.
- 970658 * MSD 17368-1 B1S2(1103166001MSD)**
8270D - MSD recovery for multiple analytes is outside of QC criteria (biased high). Refer to LCS for accuracy.
- 970823 * MS SKW10SSD0120(1103150001MS)**
6020 - MS/MSD recoveries for multiple analytes were outside of acceptance criteria (biased high). Post digestion spike was successful.
- 970824 * MSD SKW10SSD0120(1103150001MSD)**
6020 - MS/MSD recoveries for multiple analytes were outside of acceptance criteria (biased high). Post digestion spike was successful.
- 971104 * CCV CCV for HBN 481180 [VMS/11339]**
8260B - ICV recovery for dichlorodifluoromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

Haydar Turker
Shannon & Wilson, Inc.
5430 Fairbanks St., Suite 3
Anchorage, AK 99518

Work Order: 1103166
32-1-017368 AK DOT

Client: Shannon & Wilson, Inc.

Report Date: July 06, 2010

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (http://www.sgs.com/terms_and_conditions.htm), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

- * The analyte has exceeded allowable regulatory or control limits.
- ! Surrogate out of control limits.
- B Indicates the analyte is found in a blank associated with the sample.
- CCV Continuing Calibration Verification
- CL Control Limit
- D The analyte concentration is the result of a dilution.
- DF Dilution Factor
- DL Detection Limit (i.e., maximum method detection limit)
- E The analyte result is above the calibrated range.
- F Indicates value that is greater than or equal to the DL
- GT Greater Than
- ICV Initial Calibration Verification
- J The quantitation is an estimation.
- JL The analyte was positively identified, but the quantitation is a low estimation.
- LCS(D) Laboratory Control Spike (Duplicate)
- LOD Limit of Detection (i.e., 2xDL)
- LOQ Limit of Quantitation (i.e., reporting or practical quantitation limit)
- LT Less Than
- M A matrix effect was present.
- MB Method Blank
- MS(D) Matrix Spike (Duplicate)
- ND Indicates the analyte is not detected.
- Q QC parameter out of acceptance range.
- R Rejected
- RPD Relative Percent Difference
- U Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



Detectable Results Summary

Print Date: 7/6/2010 4:51 pm

Client Sample ID: **17368-1 B1S2**

SGS Ref. #: 1103166001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 9.21 | mg/Kg |
| Chromium | 41.5 | mg/Kg |
| Lead | 11.5 | mg/Kg |

Semivolatile Organic GC/MS

| | | |
|----------------------------|-------|-------|
| bis(2-Ethylhexyl)phthalate | 0.346 | mg/Kg |
|----------------------------|-------|-------|

Client Sample ID: **17368-1 B1S3**

SGS Ref. #: 1103166002

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 12.8 | mg/Kg |
| Chromium | 47.3 | mg/Kg |
| Lead | 10.3 | mg/Kg |

Client Sample ID: **17368-5 B1S4**

SGS Ref. #: 1103166003

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 8.59 | mg/Kg |
| Chromium | 31.2 | mg/Kg |
| Lead | 5.41 | mg/Kg |

Client Sample ID: **17368-9 B1S5**

SGS Ref. #: 1103166004

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 3.84 | mg/Kg |
| Cadmium | 0.256 | mg/Kg |
| Chromium | 15.8 | mg/Kg |
| Lead | 4.16 | mg/Kg |

Semivolatile Organic GC/MS

| | | |
|----------------------------|------|-------|
| bis(2-Ethylhexyl)phthalate | 1.43 | mg/Kg |
|----------------------------|------|-------|



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 9.21 | 1.05 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Cadmium | 0.210 U | 0.210 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Chromium | 41.5 | 0.419 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Lead | 11.5 | 0.210 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,1-Trichloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2-Trichloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloropropene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichloropropane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trichlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trimethylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 85.7 U | 85.7 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromoethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloroethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloropropane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3,5-Trimethylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichloropropane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,4-Dichlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2,2-Dichloropropane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 214 U | 214 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Chlorotoluene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Hexanone | 214 U | 214 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Chlorotoluene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Isopropyltoluene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 214 U | 214 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Benzene | 10.7 U | 10.7 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromochloromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromodichloromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromoform | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromomethane | 171 U | 171 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon disulfide | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon tetrachloride | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chlorobenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroethane | 171 U | 171 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroform | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,2-Dichloroethene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,3-Dichloropropene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromochloromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromomethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dichlorodifluoromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Ethylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Hexachlorobutadiene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Isopropylbenzene (Cumene) | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methylene chloride | 85.7 U | 85.7 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methyl-t-butyl ether | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Naphthalene | 42.9 U | 42.9 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| n-Butylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| o-Xylene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| P & M -Xylene | 42.9 U | 42.9 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| sec-Butylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Styrene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| tert-Butylbenzene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Tetrachloroethene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Toluene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,2-Dichloroethene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,3-Dichloropropene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichloroethene | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichlorofluoromethane | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Vinyl chloride | 21.4 U | 21.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Xylenes (total) | 64.3 U | 64.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 111 | | % | SW8260B | B | 69-132 | | 07/02/10 | DSH |
| 4-Bromofluorobenzene <surr> | 102 | | % | SW8260B | B | 65-144 | | 07/02/10 | DSH |
| Toluene-d8 <surr> | 111 | | % | SW8260B | B | 84-124 | | 07/02/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,2-Dichlorobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,3-Dichlorobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,4-Dichlorobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4,5-Trichlorophenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4,6-Trichlorophenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dichlorophenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dimethylphenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dinitrophenol | 3.15 U | 3.15 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2,6-Dinitrotoluene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Chloronaphthalene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Chlorophenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.10 U | 2.10 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methylnaphthalene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Nitroaniline | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Nitrophenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.05 U | 1.05 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3,3-Dichlorobenzidine | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3-Nitroaniline | 0.525 U | 0.525 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Bromophenyl-phenylether | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chloro-3-methylphenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chloroaniline | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Nitroaniline | 3.15 U | 3.15 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Nitrophenol | 1.05 U | 1.05 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Acenaphthene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Acenaphthylene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Aniline | 2.10 U | 2.10 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Anthracene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Azobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo(a)Anthracene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[a]pyrene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[b]Fluoranthene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[g,h,i]perylene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[k]fluoranthene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzoic acid | 1.57 U | 1.57 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzyl alcohol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.346 | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Butylbenzylphthalate | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Chrysene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dibenzo[a,h]anthracene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dibenzofuran | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Diethylphthalate | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dimethylphthalate | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Di-n-butylphthalate | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| di-n-Octylphthalate | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Fluoranthene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Fluorene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorobutadiene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorocyclopentadiene | 0.734 U | 0.734 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachloroethane | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Isophorone | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Naphthalene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Nitrobenzene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitrosodimethylamine | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitrosodiphenylamine | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Pentachlorophenol | 2.10 U | 2.10 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Phenanthrene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Phenol | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Pyrene | 0.262 U | 0.262 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |

Surrogates



SGS Ref.# 1103166001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:40
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 104 | | % | SW8270D | A | 47-125 | 07/01/10 | 07/01/10 | JDH |
| 2-Fluorobiphenyl <surr> | 72.9 | | % | SW8270D | A | 45-105 | 07/01/10 | 07/01/10 | JDH |
| 2-Fluorophenol <surr> | 55.3 | | % | SW8270D | A | 41-84 | 07/01/10 | 07/01/10 | JDH |
| Nitrobenzene-d5 <surr> | 47.7 | | % | SW8270D | A | 37-100 | 07/01/10 | 07/01/10 | JDH |
| Phenol-d6 <surr> | 71.2 | | % | SW8270D | A | 48-94 | 07/01/10 | 07/01/10 | JDH |
| Terphenyl-d14 <surr> | 107 | | % | SW8270D | A | 50-120 | 07/01/10 | 07/01/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 94.1 | | % | SM20 2540G | | | | 06/30/10 | CAB |



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 12.8 | 1.04 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Cadmium | 0.209 U | 0.209 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Chromium | 47.3 | 0.418 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Lead | 10.3 | 0.209 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,1-Trichloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2-Trichloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloropropene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichloropropane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trichlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trimethylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 137 U | 137 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromoethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloroethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloropropane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3,5-Trimethylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichloropropane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,4-Dichlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2,2-Dichloropropane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 343 U | 343 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Chlorotoluene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Hexanone | 343 U | 343 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Chlorotoluene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Isopropyltoluene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 343 U | 343 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Benzene | 17.1 U | 17.1 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromochloromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromodichloromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromoform | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromomethane | 274 U | 274 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon disulfide | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon tetrachloride | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chlorobenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroethane | 274 U | 274 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroform | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,2-Dichloroethene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,3-Dichloropropene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromochloromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromomethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dichlorodifluoromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Ethylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Hexachlorobutadiene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Isopropylbenzene (Cumene) | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methylene chloride | 137 U | 137 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methyl-t-butyl ether | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Naphthalene | 68.6 U | 68.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| n-Butylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| o-Xylene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| P & M -Xylene | 68.6 U | 68.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| sec-Butylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Styrene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| tert-Butylbenzene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Tetrachloroethene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Toluene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,2-Dichloroethene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,3-Dichloropropene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichloroethene | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichlorofluoromethane | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Vinyl chloride | 34.3 U | 34.3 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Xylenes (total) | 103 U | 103 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 110 | | % | SW8260B | B | 69-132 | | 07/02/10 | DSH |
| 4-Bromofluorobenzene <surr> | 100 | | % | SW8260B | B | 65-144 | | 07/02/10 | DSH |
| Toluene-d8 <surr> | 108 | | % | SW8260B | B | 84-124 | | 07/02/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,2-Dichlorobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,3-Dichlorobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,4-Dichlorobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4,5-Trichlorophenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4,6-Trichlorophenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dichlorophenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dimethylphenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dinitrophenol | 3.18 U | 3.18 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,6-Dinitrotoluene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Chloronaphthalene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Chlorophenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.12 U | 2.12 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methylnaphthalene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Nitroaniline | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Nitrophenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.06 U | 1.06 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3,3-Dichlorobenzidine | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3-Nitroaniline | 0.530 U | 0.530 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Bromophenyl-phenylether | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chloro-3-methylphenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chloroaniline | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Nitroaniline | 3.18 U | 3.18 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Nitrophenol | 1.06 U | 1.06 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Acenaphthene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Acenaphthylene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Aniline | 2.12 U | 2.12 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Anthracene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Azobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo(a)Anthracene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[a]pyrene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[b]Fluoranthene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[g,h,i]perylene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[k]fluoranthene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzoic acid | 1.59 U | 1.59 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzyl alcohol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Butylbenzylphthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Chrysene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dibenzo[a,h]anthracene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dibenzofuran | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Diethylphthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dimethylphthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Di-n-butylphthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| di-n-Octylphthalate | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Fluoranthene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Fluorene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorobutadiene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorocyclopentadiene | 0.742 U | 0.742 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachloroethane | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Isophorone | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Naphthalene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Nitrobenzene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitrosodimethylamine | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitrosodiphenylamine | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Pentachlorophenol | 2.12 U | 2.12 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Phenanthrene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Phenol | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Pyrene | 0.265 U | 0.265 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |

Surrogates



SGS Ref.# 1103166002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-1 B1S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/30/2010 13:55
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 103 | | % | SW8270D | A | 47-125 | 07/01/10 | 07/02/10 | JDH |
| 2-Fluorobiphenyl <surr> | 74.5 | | % | SW8270D | A | 45-105 | 07/01/10 | 07/02/10 | JDH |
| 2-Fluorophenol <surr> | 50.4 | | % | SW8270D | A | 41-84 | 07/01/10 | 07/02/10 | JDH |
| Nitrobenzene-d5 <surr> | 46.5 | | % | SW8270D | A | 37-100 | 07/01/10 | 07/02/10 | JDH |
| Phenol-d6 <surr> | 64.5 | | % | SW8270D | A | 48-94 | 07/01/10 | 07/02/10 | JDH |
| Terphenyl-d14 <surr> | 115 | | % | SW8270D | A | 50-120 | 07/01/10 | 07/02/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 92.9 | | % | SM20 2540G | | | | 06/30/10 | CAB |



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 8.59 | 0.962 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Cadmium | 0.192 U | 0.192 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Chromium | 31.2 | 0.385 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Lead | 5.41 | 0.192 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,1-Trichloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2-Trichloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloropropene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichloropropane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trichlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trimethylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 62.4 U | 62.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromoethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloroethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloropropane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3,5-Trimethylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichloropropane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,4-Dichlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2,2-Dichloropropane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 156 U | 156 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Chlorotoluene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Hexanone | 156 U | 156 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Chlorotoluene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Isopropyltoluene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 156 U | 156 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Benzene | 7.80 U | 7.80 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromochloromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromodichloromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromoform | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromomethane | 125 U | 125 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon disulfide | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon tetrachloride | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chlorobenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroethane | 125 U | 125 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroform | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,2-Dichloroethene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,3-Dichloropropene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromochloromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromomethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dichlorodifluoromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Ethylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Hexachlorobutadiene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Isopropylbenzene (Cumene) | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methylene chloride | 62.4 U | 62.4 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methyl-t-butyl ether | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Naphthalene | 31.2 U | 31.2 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| n-Butylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| o-Xylene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| P & M -Xylene | 31.2 U | 31.2 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| sec-Butylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Styrene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| tert-Butylbenzene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Tetrachloroethene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Toluene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,2-Dichloroethene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,3-Dichloropropene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichloroethene | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichlorofluoromethane | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Vinyl chloride | 15.6 U | 15.6 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Xylenes (total) | 46.8 U | 46.8 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 111 | | % | SW8260B | B | 69-132 | | 07/02/10 | DSH |
| 4-Bromofluorobenzene <surr> | 101 | | % | SW8260B | B | 65-144 | | 07/02/10 | DSH |
| Toluene-d8 <surr> | 105 | | % | SW8260B | B | 84-124 | | 07/02/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,2-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,3-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 1,4-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4,5-Trichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4,6-Trichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dimethylphenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,4-Dinitrophenol | 3.08 U | 3.08 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2,6-Dinitrotoluene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Chloronaphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Chlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methylnaphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Nitroaniline | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 2-Nitrophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.03 U | 1.03 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3,3-Dichlorobenzidine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 3-Nitroaniline | 0.514 U | 0.514 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Bromophenyl-phenylether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chloro-3-methylphenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chloroaniline | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Nitroaniline | 3.08 U | 3.08 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| 4-Nitrophenol | 1.03 U | 1.03 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Acenaphthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Acenaphthylene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Aniline | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Azobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo(a)Anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[a]pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[b]Fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[g,h,i]perylene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzo[k]fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzoic acid | 1.54 U | 1.54 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Benzyl alcohol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Butylbenzylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Chrysene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dibenzo[a,h]anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dibenzofuran | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Diethylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Dimethylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Di-n-butylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| di-n-Octylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Fluorene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorobutadiene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachlorocyclopentadiene | 0.719 U | 0.719 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Hexachloroethane | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Isophorone | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Naphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Nitrobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitrosodimethylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| N-Nitrosodiphenylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Pentachlorophenol | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Phenanthrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Phenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |
| Pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/01/10 | 07/02/10 | JDH |

Surrogates



SGS Ref.# 1103166003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 B1S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:30
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 97.6 | | % | SW8270D | A | 47-125 | 07/01/10 | 07/02/10 | JDH |
| 2-Fluorobiphenyl <surr> | 74.3 | | % | SW8270D | A | 45-105 | 07/01/10 | 07/02/10 | JDH |
| 2-Fluorophenol <surr> | 52.7 | | % | SW8270D | A | 41-84 | 07/01/10 | 07/02/10 | JDH |
| Nitrobenzene-d5 <surr> | 53.1 | | % | SW8270D | A | 37-100 | 07/01/10 | 07/02/10 | JDH |
| Phenol-d6 <surr> | 60.4 | | % | SW8270D | A | 48-94 | 07/01/10 | 07/02/10 | JDH |
| Terphenyl-d14 <surr> | 110 | | % | SW8270D | A | 50-120 | 07/01/10 | 07/02/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 95.7 | | % | SM20 2540G | | | | 06/30/10 | CAB |



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 3.84 | 0.973 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Cadmium | 0.256 | 0.195 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Chromium | 15.8 | 0.389 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |
| Lead | 4.16 | 0.195 | mg/Kg | SW6020 | A | | 07/01/10 | 07/02/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,1-Trichloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1,2-Trichloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloroethene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,1-Dichloropropene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,3-Trichloropropane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trichlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2,4-Trimethylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 55.9 U | 55.9 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dibromoethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloroethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,2-Dichloropropane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3,5-Trimethylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,3-Dichloropropane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 1,4-Dichlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2,2-Dichloropropane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 2-Butanone (MEK) | 140 U | 140 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Chlorotoluene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 2-Hexanone | 140 U | 140 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Chlorotoluene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Isopropyltoluene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 140 U | 140 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Benzene | 6.99 U | 6.99 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromochloromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromodichloromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromoform | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Bromomethane | 112 U | 112 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon disulfide | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Carbon tetrachloride | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chlorobenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroethane | 112 U | 112 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloroform | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Chloromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,2-Dichloroethene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| cis-1,3-Dichloropropene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromochloromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dibromomethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Dichlorodifluoromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Ethylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Hexachlorobutadiene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Isopropylbenzene (Cumene) | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methylene chloride | 55.9 U | 55.9 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Methyl-t-butyl ether | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Naphthalene | 28.0 U | 28.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| n-Butylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| o-Xylene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| P & M -Xylene | 28.0 U | 28.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| sec-Butylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Styrene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| tert-Butylbenzene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Tetrachloroethene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Toluene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,2-Dichloroethene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| trans-1,3-Dichloropropene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichloroethene | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Trichlorofluoromethane | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Vinyl chloride | 14.0 U | 14.0 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| Xylenes (total) | 41.9 U | 41.9 | ug/Kg | SW8260B | B | | | 07/02/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 118 | | % | SW8260B | B | 69-132 | | 07/02/10 | DSH |
| 4-Bromofluorobenzene <surr> | 107 | | % | SW8260B | B | 65-144 | | 07/02/10 | DSH |
| Toluene-d8 <surr> | 112 | | % | SW8260B | B | 84-124 | | 07/02/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,2-Dichlorobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,3-Dichlorobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 1,4-Dichlorobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4,5-Trichlorophenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4,6-Trichlorophenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dichlorophenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dimethylphenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |
| 2,4-Dinitrophenol | 3.13 U | 3.13 | mg/Kg | SW8270D | A | | | 07/01/10 | JDH |



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2,6-Dinitrotoluene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Chloronaphthalene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Chlorophenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.09 U | 2.09 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methylnaphthalene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Nitroaniline | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 2-Nitrophenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.04 U | 1.04 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3,3-Dichlorobenzidine | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 3-Nitroaniline | 0.522 U | 0.522 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Bromophenyl-phenylether | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chloro-3-methylphenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chloroaniline | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Nitroaniline | 3.13 U | 3.13 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| 4-Nitrophenol | 1.04 U | 1.04 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Acenaphthene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Acenaphthylene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Aniline | 2.09 U | 2.09 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Anthracene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Azobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo(a)Anthracene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[a]pyrene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[b]Fluoranthene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[g,h,i]perylene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzo[k]fluoranthene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzoic acid | 1.57 U | 1.57 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Benzyl alcohol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 1.43 | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Butylbenzylphthalate | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Chrysene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dibenzo[a,h]anthracene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dibenzofuran | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Diethylphthalate | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Dimethylphthalate | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Di-n-butylphthalate | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| di-n-Octylphthalate | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Fluoranthene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Fluorene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorobutadiene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachlorocyclopentadiene | 0.731 U | 0.731 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Hexachloroethane | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Isophorone | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Naphthalene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Nitrobenzene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitrosodimethylamine | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| N-Nitrosodiphenylamine | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Pentachlorophenol | 2.09 U | 2.09 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Phenanthrene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Phenol | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |
| Pyrene | 0.261 U | 0.261 | mg/Kg | SW8270D | A | | 07/01/10 | 07/01/10 | JDH |

Surrogates



SGS Ref.# 1103166004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-9 B1S5
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 16:03
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 104 | | % | SW8270D | A | 47-125 | 07/01/10 | 07/01/10 | JDH |
| 2-Fluorobiphenyl <surr> | 68.4 | | % | SW8270D | A | 45-105 | 07/01/10 | 07/01/10 | JDH |
| 2-Fluorophenol <surr> | 47.2 | | % | SW8270D | A | 41-84 | 07/01/10 | 07/01/10 | JDH |
| Nitrobenzene-d5 <surr> | 48.4 | | % | SW8270D | A | 37-100 | 07/01/10 | 07/01/10 | JDH |
| Phenol-d6 <surr> | 59.7 | | % | SW8270D | A | 48-94 | 07/01/10 | 07/01/10 | JDH |
| Terphenyl-d14 <surr> | 111 | | % | SW8270D | A | 50-120 | 07/01/10 | 07/01/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 94.7 | | % | SM20 2540G | | | | 06/30/10 | CAB |



SGS Ref.# 1103166005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:20
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1,1-Trichloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1,2-Trichloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1-Dichloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1-Dichloroethene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,1-Dichloropropene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2,3-Trichlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2,3-Trichloropropane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2,4-Trichlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2,4-Trimethylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 116 U | 116 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2-Dibromoethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2-Dichlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2-Dichloroethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,2-Dichloropropane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,3,5-Trimethylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,3-Dichlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,3-Dichloropropane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 1,4-Dichlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 2,2-Dichloropropane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 2-Butanone (MEK) | 290 U | 290 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 2-Chlorotoluene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 2-Hexanone | 290 U | 290 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 4-Chlorotoluene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 4-Isopropyltoluene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 290 U | 290 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Benzene | 14.5 U | 14.5 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |



SGS Ref.# 1103166005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:20
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Bromochloromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Bromodichloromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Bromoform | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Bromomethane | 232 U | 232 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Carbon disulfide | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Carbon tetrachloride | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Chlorobenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Chloroethane | 232 U | 232 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Chloroform | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Chloromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| cis-1,2-Dichloroethene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| cis-1,3-Dichloropropene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Dibromochloromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Dibromomethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Dichlorodifluoromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Ethylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Hexachlorobutadiene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Isopropylbenzene (Cumene) | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Methylene chloride | 116 U | 116 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Methyl-t-butyl ether | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Naphthalene | 57.9 U | 57.9 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| n-Butylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| n-Propylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| o-Xylene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| P & M -Xylene | 57.9 U | 57.9 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| sec-Butylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Styrene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| tert-Butylbenzene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Tetrachloroethene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |



SGS Ref.# 1103166005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Client Sample ID 17368-5 TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Collected Date/Time 06/29/2010 11:20
Received Date/Time 06/30/2010 16:15
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Toluene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| trans-1,2-Dichloroethene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| trans-1,3-Dichloropropene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Trichloroethene | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Trichlorofluoromethane | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Vinyl chloride | 29.0 U | 29.0 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Xylenes (total) | 86.9 U | 86.9 | ug/Kg | SW8260B | A | | | 07/02/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 107 | | % | SW8260B | A | 69-132 | | 07/02/10 | DSH |
| 4-Bromofluorobenzene <surr> | 107 | | % | SW8260B | A | 65-144 | | 07/02/10 | DSH |
| Toluene-d8 <surr> | 116 | | % | SW8260B | A | 84-124 | | 07/02/10 | DSH |



SGS Ref.# 970653 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch
Method
Date

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 06/30/10 |
| Batch | SPT8172 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 970655 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch XXX22944
Method SW3550C
Date 07/01/2010

QC results affect the following production samples:

1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 970655 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch Method XXX22944
Date SW3550C
 07/01/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|--|---------|--------|--------|-------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | |
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/02/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/02/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/02/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/02/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/02/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/02/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/02/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/02/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |



SGS Ref.# 970655 Method Blank
 Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-017368 AK DOT
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method SW3550C
 Date 07/01/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|-------------------------------|---------|-------|--------|-------|----------|
| Bis(2chloro1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/02/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/02/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/02/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 81.2 | 47-125 | | % | 07/02/10 |
| 2-Fluorobiphenyl <surr> | 72.9 | 45-105 | | % | 07/02/10 |
| 2-Fluorophenol <surr> | 67.2 | 41-84 | | % | 07/02/10 |
| Nitrobenzene-d5 <surr> | 65 | 37-100 | | % | 07/02/10 |
| Phenol-d6 <surr> | 70.1 | 48-94 | | % | 07/02/10 |
| Terphenyl-d14 <surr> | 105 | 50-120 | | % | 07/02/10 |



SGS Ref.# 970655 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch XXX22944
Method SW3550C
Date 07/01/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

Batch XMS5498
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 970821 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch MXX23164
Method SW3050B
Date 07/01/2010

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/02/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/02/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/02/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/02/10 |

Batch MMS6504
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971086 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch
Method
Date

QC results affect the following production samples:

1103166001, 1103166002, 1103166003, 1103166004, 1103166005

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971086 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|---|---------|--------|------|-------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | |
| 1,1,1,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1,1-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1,2,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1,2-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,1-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2,3-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2,3-Trichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2,4-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2,4-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2-Dibromo-3-chloropropane | 62.0 U | 100 | 31.0 | ug/Kg | 07/01/10 |
| 1,2-Dibromoethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,3,5-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,3-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,3-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 1,4-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 2,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 2-Butanone (MEK) | 156 U | 250 | 78.0 | ug/Kg | 07/01/10 |
| 2-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 2-Hexanone | 156 U | 250 | 78.0 | ug/Kg | 07/01/10 |
| 4-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 4-Isopropyltoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| 4-Methyl-2-pentanone (MIBK) | 156 U | 250 | 78.0 | ug/Kg | 07/01/10 |
| Benzene | 7.80 U | 12.5 | 3.90 | ug/Kg | 07/01/10 |
| Bromobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Bromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Bromodichloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Bromoform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Bromomethane | 124 U | 200 | 62.0 | ug/Kg | 07/01/10 |
| Carbon disulfide | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Carbon tetrachloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Chlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Chloroethane | 124 U | 200 | 62.0 | ug/Kg | 07/01/10 |
| Chloroform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Chloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |



SGS Ref.# 971086 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|--------|------|------|-------|----------|
| cis-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| cis-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Dibromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Dibromomethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Dichlorodifluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Ethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Hexachlorobutadiene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Isopropylbenzene (Cumene) | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Methylene chloride | 62.0 U | 100 | 31.0 | ug/Kg | 07/01/10 |
| Methyl-t-butyl ether | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Naphthalene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/01/10 |
| n-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| n-Propylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| o-Xylene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| P & M -Xylene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/01/10 |
| sec-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Styrene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| tert-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Tetrachloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Toluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| trans-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| trans-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Trichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Trichlorofluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Vinyl chloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/01/10 |
| Xylenes (total) | 47.0 U | 75.0 | 23.5 | ug/Kg | 07/01/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 104 | 69-132 | | % | 07/01/10 |
| 4-Bromofluorobenzene <surr> | 99.6 | 65-144 | | % | 07/01/10 |
| Toluene-d8 <surr> | 102 | 84-124 | | % | 07/01/10 |

Batch VMS11339
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 970654 Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Original 1103135001
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
Prep Batch
Method
Date

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|--------------|------------|------|---|---|--------|------------|
| Total Solids | 93.7 | 93.5 | % | 0 | (< 15) | 06/30/2010 |
| Batch | SPT8172 | | | | | |
| Method | SM20 2540G | | | | | |
| Instrument | | | | | | |



SGS Ref.# 970656 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method SW3550C
 Date 07/01/2010

Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-017368 AK DOT
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103166001, 1103166002, 1103166003, 1103166004

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 2.74 | 62 | (54-101) | | 4.44 mg/Kg | 07/01/2010 |
| 1,2-Dichlorobenzene | LCS | 2.74 | 62 | (52-92) | | 4.44 mg/Kg | 07/01/2010 |
| 1,3-Dichlorobenzene | LCS | 2.70 | 61 | (52-92) | | 4.44 mg/Kg | 07/01/2010 |
| 1,4-Dichlorobenzene | LCS | 2.61 | 59 | (51-92) | | 4.44 mg/Kg | 07/01/2010 |
| 2,4,5-Trichlorophenol | LCS | 3.84 | 86 | (71-110) | | 4.44 mg/Kg | 07/01/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.69 | 83 | (67-110) | | 4.44 mg/Kg | 07/01/2010 |
| 2,4-Dichlorophenol | LCS | 3.17 | 71 | (64-107) | | 4.44 mg/Kg | 07/01/2010 |
| 2,4-Dimethylphenol | LCS | 3.23 | 73 | (63-105) | | 4.44 mg/Kg | 07/01/2010 |
| 2,4-Dinitrophenol | LCS | 7.38 | 92 | (43-130) | | 8 mg/Kg | 07/01/2010 |
| 2,4-Dinitrotoluene | LCS | 4.60 | 104 | (64-115) | | 4.44 mg/Kg | 07/01/2010 |
| 2,6-Dinitrotoluene | LCS | 4.17 | 94 | (67-110) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Chloronaphthalene | LCS | 2.79 | 63 | (52-103) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Chlorophenol | LCS | 2.93 | 66 | (56-94) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.92 | 112 | (51-131) | | 8 mg/Kg | 07/01/2010 |
| 2-Methylnaphthalene | LCS | 3.15 | 71 | (61-105) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.09 | 69 | (61-101) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Nitroaniline | LCS | 4.16 | 94 | (70-120) | | 4.44 mg/Kg | 07/01/2010 |
| 2-Nitrophenol | LCS | 3.12 | 70 | (65-101) | | 4.44 mg/Kg | 07/01/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.71 | 76 | (65-105) | | 6.22 mg/Kg | 07/01/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.69 | 105 | (49-128) | | 4.44 mg/Kg | 07/01/2010 |



SGS Ref.# 970656 Lab Control Sample
 Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-017368 AK DOT
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method SW3550C
 Date 07/01/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 3-Nitroaniline | LCS | 4.48 | 101 | (66-110) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Bromophenyl-phenylether | LCS | 3.54 | 80 | (53-102) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.69 | 83 | (69-114) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Chloroaniline | LCS | 3.04 | 68 | (58-102) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.57 | 80 | (53-110) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Nitroaniline | LCS | 5.03 | 113 | (63-115) | | 4.44 mg/Kg | 07/01/2010 |
| 4-Nitrophenol | LCS | 6.25 | 100 | (44-137) | | 6.22 mg/Kg | 07/01/2010 |
| Acenaphthene | LCS | 3.41 | 77 | (57-110) | | 4.44 mg/Kg | 07/01/2010 |
| Acenaphthylene | LCS | 3.48 | 78 | (56-105) | | 4.44 mg/Kg | 07/01/2010 |
| Aniline | LCS | 2.61 | 59 | (40-92) | | 4.44 mg/Kg | 07/01/2010 |
| Anthracene | LCS | 4.42 | 99 | (65-105) | | 4.44 mg/Kg | 07/01/2010 |
| Azobenzene | LCS | 4.01 | 90 | (54-120) | | 4.44 mg/Kg | 07/01/2010 |
| Benzo(a)Anthracene | LCS | 4.64 | 104 | (72-110) | | 4.44 mg/Kg | 07/01/2010 |
| Benzo[a]pyrene | LCS | 4.77 | 107 | (71-110) | | 4.44 mg/Kg | 07/01/2010 |
| Benzo[b]Fluoranthene | LCS | 4.37 | 98 | (70-115) | | 4.44 mg/Kg | 07/01/2010 |
| Benzo[g,h,i]perylene | LCS | 5.09 | 115 | (52-125) | | 4.44 mg/Kg | 07/01/2010 |
| Benzo[k]fluoranthene | LCS | 4.45 | 100 | (66-125) | | 4.44 mg/Kg | 07/01/2010 |
| Benzoic acid | LCS | 3.25 | 52 | (25-76) | | 6.22 mg/Kg | 07/01/2010 |
| Benzyl alcohol | LCS | 3.14 | 71 | (61-110) | | 4.44 mg/Kg | 07/01/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 2.83 | 64 | (50-97) | | 4.44 mg/Kg | 07/01/2010 |



SGS Ref.# 970656 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method SW3550C
 Date 07/01/2010

Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-017368 AK DOT
 Matrix Soil/Solid (dry weight)

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| Bis(2-Chloroethoxy)methane | LCS | 3.08 | 69 | (57-104) | | | 4.44 mg/Kg | 07/01/2010 |
| Bis(2-Chloroethyl)ether | LCS | 2.78 | 63 | (49-91) | | | 4.44 mg/Kg | 07/01/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.67 | 105 | (62-120) | | | 4.44 mg/Kg | 07/01/2010 |
| Butylbenzylphthalate | LCS | 4.82 | 108 | (69-120) | | | 4.44 mg/Kg | 07/01/2010 |
| Chrysene | LCS | 4.49 | 101 | (72-110) | | | 4.44 mg/Kg | 07/01/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.92 | 111 | (61-125) | | | 4.44 mg/Kg | 07/01/2010 |
| Dibenzofuran | LCS | 3.65 | 82 | (60-105) | | | 4.44 mg/Kg | 07/01/2010 |
| Diethylphthalate | LCS | 4.33 | 98 | (50-115) | | | 4.44 mg/Kg | 07/01/2010 |
| Dimethylphthalate | LCS | 4.10 | 92 | (59-110) | | | 4.44 mg/Kg | 07/01/2010 |
| Di-n-butylphthalate | LCS | 4.53 | 102 | (56-110) | | | 4.44 mg/Kg | 07/01/2010 |
| di-n-Octylphthalate | LCS | 4.79 | 108 | (61-123) | | | 4.44 mg/Kg | 07/01/2010 |
| Fluoranthene | LCS | 4.67 | 105 | (64-115) | | | 4.44 mg/Kg | 07/01/2010 |
| Fluorene | LCS | 3.28 | 74 | (64-110) | | | 4.44 mg/Kg | 07/01/2010 |
| Hexachlorobenzene | LCS | 4.36 | 98 | (63-120) | | | 4.44 mg/Kg | 07/01/2010 |
| Hexachlorobutadiene | LCS | 3.03 | 68 | (57-107) | | | 4.44 mg/Kg | 07/01/2010 |
| Hexachlorocyclopentadiene | LCS | 3.27 | 74 | (35-102) | | | 4.44 mg/Kg | 07/01/2010 |
| Hexachloroethane | LCS | 2.63 | 59 | (51-89) | | | 4.44 mg/Kg | 07/01/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.86 | 109 | (60-120) | | | 4.44 mg/Kg | 07/01/2010 |
| Isophorone | LCS | 3.16 | 71 | (57-108) | | | 4.44 mg/Kg | 07/01/2010 |
| Naphthalene | LCS | 2.94 | 66 | (51-105) | | | 4.44 mg/Kg | 07/01/2010 |
| Nitrobenzene | LCS | 3.00 | 68 | (53-99) | | | 4.44 mg/Kg | 07/01/2010 |



SGS Ref.# 970656 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method SW3550C
 Date 07/01/2010

Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-017368 AK DOT
 Matrix Soil/Solid (dry weight)

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|-----|------------|--|------------|------------|
| N-Nitrosodimethylamine | LCS | 2.69 | 61 | (45-90) | | 4.44 mg/Kg | 07/01/2010 |
| N-Nitroso-di-n-propylamine | LCS | 2.96 | 67 | (59-100) | | 4.44 mg/Kg | 07/01/2010 |
| N-Nitrosodiphenylamine | LCS | 3.61 | 81 | (61-114) | | 4.44 mg/Kg | 07/01/2010 |
| Pentachlorophenol | LCS | 5.83 | 94 | (56-117) | | 6.22 mg/Kg | 07/01/2010 |
| Phenanthrene | LCS | 4.47 | 101 | (63-110) | | 4.44 mg/Kg | 07/01/2010 |
| Phenol | LCS | 3.08 | 69 | (56-97) | | 4.44 mg/Kg | 07/01/2010 |
| Pyrene | LCS | 4.50 | 101 | (70-123) | | 4.44 mg/Kg | 07/01/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 98 | (47-125) | | | 07/01/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 71 | (45-105) | | | 07/01/2010 |
| 2-Fluorophenol <surr> | LCS | | 61 | (41-84) | | | 07/01/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 68 | (37-100) | | | 07/01/2010 |
| Phenol-d6 <surr> | LCS | | 69 | (48-94) | | | 07/01/2010 |
| Terphenyl-d14 <surr> | LCS | | 104 | (50-120) | | | 07/01/2010 |

Batch XMS5496
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 970822 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
Prep Batch MXX23164
Method SW3050B
Date 07/01/2010

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------|-----------------|------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | |
| Arsenic | LCS | 50.9 | 102 | (80-120) | | 50 mg/Kg | 07/02/2010 |
| Cadmium | LCS | 5.19 | 104 | (80-120) | | 5 mg/Kg | 07/02/2010 |
| Chromium | LCS | 21.6 | 108 | (80-120) | | 20 mg/Kg | 07/02/2010 |
| Lead | LCS | 54.4 | 109 | (80-120) | | 50 mg/Kg | 07/02/2010 |

Batch MMS6504
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971087 Lab Control Sample

Printed Date/Time 07/06/2010 16:51

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Prep Batch
Method
Date

QC results affect the following production samples:

1103166001, 1103166002, 1103166003, 1103166004, 1103166005

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971087 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
Prep Batch Method Date

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 756 | 101 | (77-123) | | 750 ug/Kg | 07/01/2010 |
| 1,1,1-Trichloroethane | LCS | 839 | 112 | (77-129) | | 750 ug/Kg | 07/01/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 747 | 100 | (80-122) | | 750 ug/Kg | 07/01/2010 |
| 1,1,2-Trichloroethane | LCS | 752 | 100 | (85-121) | | 750 ug/Kg | 07/01/2010 |
| 1,1-Dichloroethane | LCS | 712 | 95 | (81-126) | | 750 ug/Kg | 07/01/2010 |
| 1,1-Dichloroethene | LCS | 747 | 100 | (75-125) | | 750 ug/Kg | 07/01/2010 |
| 1,1-Dichloropropene | LCS | 839 | 112 | (76-134) | | 750 ug/Kg | 07/01/2010 |
| 1,2,3-Trichlorobenzene | LCS | 745 | 99 | (78-124) | | 750 ug/Kg | 07/01/2010 |
| 1,2,3-Trichloropropane | LCS | 818 | 109 | (77-125) | | 750 ug/Kg | 07/01/2010 |
| 1,2,4-Trichlorobenzene | LCS | 784 | 105 | (77-126) | | 750 ug/Kg | 07/01/2010 |
| 1,2,4-Trimethylbenzene | LCS | 782 | 104 | (85-121) | | 750 ug/Kg | 07/01/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 780 | 104 | (60-135) | | 750 ug/Kg | 07/01/2010 |
| 1,2-Dibromoethane | LCS | 784 | 105 | (85-124) | | 750 ug/Kg | 07/01/2010 |
| 1,2-Dichlorobenzene | LCS | 784 | 105 | (88-113) | | 750 ug/Kg | 07/01/2010 |
| 1,2-Dichloroethane | LCS | 844 | 113 | (83-121) | | 750 ug/Kg | 07/01/2010 |
| 1,2-Dichloropropane | LCS | 796 | 106 | (81-120) | | 750 ug/Kg | 07/01/2010 |
| 1,3,5-Trimethylbenzene | LCS | 831 | 111 | (87-120) | | 750 ug/Kg | 07/01/2010 |
| 1,3-Dichlorobenzene | LCS | 760 | 101 | (86-117) | | 750 ug/Kg | 07/01/2010 |
| 1,3-Dichloropropane | LCS | 740 | 99 | (84-123) | | 750 ug/Kg | 07/01/2010 |
| 1,4-Dichlorobenzene | LCS | 787 | 105 | (86-118) | | 750 ug/Kg | 07/01/2010 |
| 2,2-Dichloropropane | LCS | 821 | 110 | (69-132) | | 750 ug/Kg | 07/01/2010 |



SGS Ref.# 971087 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|-----------------------------|-----|------|-----|------------|--|------------|------------|
| 2-Butanone (MEK) | LCS | 2160 | 96 | (57-135) | | 2250 ug/Kg | 07/01/2010 |
| 2-Chlorotoluene | LCS | 755 | 101 | (81-122) | | 750 ug/Kg | 07/01/2010 |
| 2-Hexanone | LCS | 2230 | 99 | (58-145) | | 2250 ug/Kg | 07/01/2010 |
| 4-Chlorotoluene | LCS | 768 | 102 | (84-120) | | 750 ug/Kg | 07/01/2010 |
| 4-Isopropyltoluene | LCS | 772 | 103 | (83-121) | | 750 ug/Kg | 07/01/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2550 | 113 | (67-135) | | 2250 ug/Kg | 07/01/2010 |
| Benzene | LCS | 740 | 99 | (81-124) | | 750 ug/Kg | 07/01/2010 |
| Bromobenzene | LCS | 806 | 107 | (86-119) | | 750 ug/Kg | 07/01/2010 |
| Bromochloromethane | LCS | 839 | 112 | (79-125) | | 750 ug/Kg | 07/01/2010 |
| Bromodichloromethane | LCS | 811 | 108 | (81-127) | | 750 ug/Kg | 07/01/2010 |
| Bromoform | LCS | 736 | 98 | (72-135) | | 750 ug/Kg | 07/01/2010 |
| Bromomethane | LCS | 698 | 93 | (49-141) | | 750 ug/Kg | 07/01/2010 |
| Carbon disulfide | LCS | 1020 | 90 | (58-155) | | 1130 ug/Kg | 07/01/2010 |
| Carbon tetrachloride | LCS | 809 | 108 | (79-128) | | 750 ug/Kg | 07/01/2010 |
| Chlorobenzene | LCS | 763 | 102 | (84-121) | | 750 ug/Kg | 07/01/2010 |
| Chloroethane | LCS | 811 | 108 | (51-141) | | 750 ug/Kg | 07/01/2010 |
| Chloroform | LCS | 837 | 112 | (77-124) | | 750 ug/Kg | 07/01/2010 |
| Chloromethane | LCS | 689 | 92 | (54-129) | | 750 ug/Kg | 07/01/2010 |
| cis-1,2-Dichloroethene | LCS | 775 | 103 | (82-124) | | 750 ug/Kg | 07/01/2010 |
| cis-1,3-Dichloropropene | LCS | 822 | 110 | (82-122) | | 750 ug/Kg | 07/01/2010 |



SGS Ref.# 971087 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| Dibromochloromethane | LCS | 816 | 109 | (84-125) | | 750 ug/Kg | 07/01/2010 |
| Dibromomethane | LCS | 797 | 106 | (80-123) | | 750 ug/Kg | 07/01/2010 |
| Dichlorodifluoromethane | LCS | 767 | 102 | (43-135) | | 750 ug/Kg | 07/01/2010 |
| Ethylbenzene | LCS | 772 | 103 | (87-119) | | 750 ug/Kg | 07/01/2010 |
| Hexachlorobutadiene | LCS | 760 | 101 | (74-124) | | 750 ug/Kg | 07/01/2010 |
| Isopropylbenzene (Cumene) | LCS | 795 | 106 | (89-121) | | 750 ug/Kg | 07/01/2010 |
| Methylene chloride | LCS | 720 | 96 | (63-137) | | 750 ug/Kg | 07/01/2010 |
| Methyl-t-butyl ether | LCS | 1120 | 99 | (76-133) | | 1130 ug/Kg | 07/01/2010 |
| Naphthalene | LCS | 722 | 96 | (73-131) | | 750 ug/Kg | 07/01/2010 |
| n-Butylbenzene | LCS | 762 | 102 | (82-127) | | 750 ug/Kg | 07/01/2010 |
| n-Propylbenzene | LCS | 766 | 102 | (82-125) | | 750 ug/Kg | 07/01/2010 |
| o-Xylene | LCS | 796 | 106 | (89-120) | | 750 ug/Kg | 07/01/2010 |
| P & M -Xylene | LCS | 1560 | 104 | (88-121) | | 1500 ug/Kg | 07/01/2010 |
| sec-Butylbenzene | LCS | 762 | 102 | (84-122) | | 750 ug/Kg | 07/01/2010 |
| Styrene | LCS | 781 | 104 | (91-120) | | 750 ug/Kg | 07/01/2010 |
| tert-Butylbenzene | LCS | 751 | 100 | (82-122) | | 750 ug/Kg | 07/01/2010 |
| Tetrachloroethene | LCS | 759 | 101 | (82-125) | | 750 ug/Kg | 07/01/2010 |
| Toluene | LCS | 768 | 102 | (87-119) | | 750 ug/Kg | 07/01/2010 |
| trans-1,2-Dichloroethene | LCS | 703 | 94 | (79-125) | | 750 ug/Kg | 07/01/2010 |
| trans-1,3-Dichloropropene | LCS | 811 | 108 | (86-122) | | 750 ug/Kg | 07/01/2010 |
| Trichloroethene | LCS | 839 | 112 | (77-124) | | 750 ug/Kg | 07/01/2010 |



SGS Ref.# 971087 Lab Control Sample

Printed Date/Time 07/06/2010 16:51
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-017368 AK DOT
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-----|-----|------------|--|-----------|------------|
| Trichlorofluoromethane | LCS | 901 | 120 | (64-139) | | 750 ug/Kg | 07/01/2010 |
|------------------------|-----|-----|-----|------------|--|-----------|------------|

| | | | | | | | |
|----------------|-----|-----|----|------------|--|-----------|------------|
| Vinyl chloride | LCS | 691 | 92 | (67-125) | | 750 ug/Kg | 07/01/2010 |
|----------------|-----|-----|----|------------|--|-----------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2350 | 105 | (89-120) | | 2250 ug/Kg | 07/01/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|-----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 108 | (69-132) | | | 07/01/2010 |
|------------------------------|-----|--|-----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 100 | (65-144) | | | 07/01/2010 |
|-----------------------------|-----|--|-----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 106 | (84-124) | | | 07/01/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11339
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 970657 Matrix Spike
 970658 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method Sonication Extraction Soil SW8
 Date 07/01/2010

Original 1103166001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|------------------------------------|------------|-----------------|-----------|-----------|---------------|-------|------------|---------------|---------------|
| Semivolatiles Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (0.262) U | 3.33 | 71 | (54-101) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.40 | 74 | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 1,2-Dichlorobenzene | MS | (0.262) U | 3.04 | 65 | (52-92) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.04 | 66 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 1,3-Dichlorobenzene | MS | (0.262) U | 2.98 | 64 | (52-92) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 2.94 | 64 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 1,4-Dichlorobenzene | MS | (0.262) U | 2.90 | 62 | (51-92) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 2.93 | 63 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,4,5-Trichlorophenol | MS | (0.262) U | 5.22 | 112* | (71-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.18 | 112* | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,4,6-Trichlorophenol | MS | (0.262) U | 5.13 | 110 | (67-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.06 | 109 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,4-Dichlorophenol | MS | (0.262) U | 4.21 | 90 | (64-107) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.47 | 97 | | 6 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,4-Dimethylphenol | MS | (0.262) U | 4.03 | 86 | (63-105) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.18 | 90 | | 4 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,4-Dinitrophenol | MS | (3.15) U | 0.00 | 0* | (43-130) | | | 8.42 mg/Kg | 07/01/2010 |
| | MSD | | 4.80 | 58 | | 0 | (< 30) | 8.33 mg/Kg | 07/02/2010 |
| 2,4-Dinitrotoluene | MS | (0.262) U | 4.05 | 87 | (64-115) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.52 | 98 | | 11 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2,6-Dinitrotoluene | MS | (0.262) U | 4.01 | 86 | (67-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.35 | 94 | | 8 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Chloronaphthalene | MS | (0.262) U | 3.89 | 83 | (52-103) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.84 | 83 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Chlorophenol | MS | (0.262) U | 3.37 | 72 | (56-94) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.34 | 72 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (2.10) U | 1.30 | 16* | (51-131) | | | 8.42 mg/Kg | 07/01/2010 |
| | MSD | | 6.59 | 79 | | 134 * | (< 30) | 8.33 mg/Kg | 07/02/2010 |
| 2-Methylnaphthalene | MS | (0.262) U | 3.74 | 80 | (61-105) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.96 | 86 | | 6 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Methylphenol (o-Cresol) | MS | (0.262) U | 3.72 | 80 | (61-101) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.72 | 80 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Nitroaniline | MS | (0.262) U | 4.35 | 93 | (70-120) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.33 | 93 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 2-Nitrophenol | MS | (0.262) U | 2.78 | 60* | (65-101) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.39 | 73 | | 20 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 3&4-Methylphenol (p&m-Cresol) | MS | (1.05) U | 5.82 | 89 | (65-105) | | | 6.55 mg/Kg | 07/01/2010 |



SGS Ref.# 970657 Matrix Spike
 970658 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method Sonication Extraction Soil SW8
 Date 07/01/2010

Original 1103166001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|------------------------------------|--------------|-----------------|-----------|-----------|---------------|------|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| | MSD | | 5.70 | 88 | | 2 | (< 30) | 6.48 mg/Kg | 07/02/2010 |
| 3,3-Dichlorobenzidine | MS (0.262) U | 2.94 | 63 | (49-128) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 2.59 | 56 | | | 13 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 3-Nitroaniline | MS (0.525) U | 3.77 | 81 | (66-110) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 3.79 | 82 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Bromophenyl-phenylether | MS (0.262) U | 4.08 | 87 | (53-102) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.11 | 89 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Chloro-3-methylphenol | MS (0.262) U | 4.75 | 101 | (69-114) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.91 | 106 | | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Chloroaniline | MS (0.262) U | 2.94 | 63 | (58-102) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 2.68 | 58* | | | 10 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Chlorophenyl-phenylether | MS (0.262) U | 4.39 | 94 | (53-110) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.43 | 96 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Nitroaniline | MS (3.15) U | 3.94 | 84 | (63-115) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.03 | 87 | | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| 4-Nitrophenol | MS (1.05) U | 5.87 | 90 | (44-137) | | | | 6.55 mg/Kg | 07/01/2010 |
| | MSD | 5.41 | 83 | | | 8 | (< 30) | 6.48 mg/Kg | 07/02/2010 |
| Acenaphthene | MS (0.262) U | 4.31 | 92 | (57-110) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.35 | 94 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Acenaphthylene | MS (0.262) U | 4.33 | 93 | (56-105) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.27 | 92 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Aniline | MS (2.10) U | 2.45 | 52 | (40-92) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 2.07 | 45 | | | 17 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Anthracene | MS (0.262) U | 4.75 | 102 | (65-105) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.76 | 103 | | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Azobenzene | MS (0.262) U | 4.73 | 101 | (54-120) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.80 | 104 | | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzo(a)Anthracene | MS (0.262) U | 4.87 | 104 | (72-110) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.92 | 106 | | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzo[a]pyrene | MS (0.262) U | 4.96 | 106 | (71-110) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.80 | 104 | | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzo[b]Fluoranthene | MS (0.262) U | 6.67 | 143* | (70-115) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.37 | 94 | | | 42 * | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzo[g,h,i]perylene | MS (0.262) U | 4.54 | 97 | (52-125) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 5.04 | 109 | | | 10 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzo[k]fluoranthene | MS (0.262) U | 9.84 | 211* | (66-125) | | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | 4.69 | 101 | | | 71 * | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Benzoic acid | MS (1.57) U | 3.57 | 55 | (25-76) | | | | 6.55 mg/Kg | 07/01/2010 |
| | MSD | 3.12 | 48 | | | 13 | (< 30) | 6.48 mg/Kg | 07/02/2010 |
| Benzyl alcohol ^{53 of 65} | MS (0.262) U | 3.60 | 77 | (61-110) | | | | 4.68 mg/Kg | 07/01/2010 |



SGS Ref.# 970657 Matrix Spike
 970658 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method Sonication Extraction Soil SW8
 Date 07/01/2010

Original 1103166001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|--------------|-----------------|-----------|-----------|---------------|------|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| | MSD | | 3.33 | 72 | | 8 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Bis(2chloro1methylethyl)Ether | MS (0.262) U | | 3.19 | 68 | (50-97) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.18 | 69 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Bis(2-Chloroethoxy)methane | MS (0.262) U | | 3.40 | 73 | (57-104) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.37 | 73 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Bis(2-Chloroethyl)ether | MS (0.262) U | | 2.91 | 62 | (49-91) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 2.77 | 60 | | 5 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| bis(2-Ethylhexyl)phthalate | MS 0.346 | | 5.82 | 117 | (62-120) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 6.22 | 127* | | 7 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Butylbenzylphthalate | MS (0.262) U | | 5.53 | 118 | (69-120) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.67 | 123* | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Chrysene | MS (0.262) U | | 4.71 | 101 | (72-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.70 | 102 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Dibenzo[a,h]anthracene | MS (0.262) U | | 4.89 | 105 | (61-125) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.05 | 109 | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Dibenzofuran | MS (0.262) U | | 4.43 | 95 | (60-105) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.54 | 98 | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Diethylphthalate | MS (0.262) U | | 4.60 | 99 | (50-115) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.82 | 104 | | 5 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Dimethylphthalate | MS (0.262) U | | 4.33 | 93 | (59-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.34 | 94 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Di-n-butylphthalate | MS (0.262) U | | 5.07 | 108 | (56-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.20 | 112* | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| di-n-Octylphthalate | MS (0.262) U | | 5.58 | 119 | (61-123) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 5.93 | 128* | | 6 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Fluoranthene | MS (0.262) U | | 4.78 | 102 | (64-115) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.81 | 104 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Fluorene | MS (0.262) U | | 3.82 | 82 | (64-110) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.92 | 85 | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Hexachlorobenzene | MS (0.262) U | | 4.80 | 103 | (63-120) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.80 | 104 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Hexachlorobutadiene | MS (0.262) U | | 3.85 | 82 | (57-107) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.91 | 85 | | 2 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Hexachlorocyclopentadiene | MS (0.734) U | | 1.29 | 27* | (35-102) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 2.38 | 52 | | 60 * | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Hexachloroethane | MS (0.262) U | | 2.65 | 57 | (51-89) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 3.12 | 68 | | 17 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Indeno[1,2,3-c,d] pyrene | MS (0.262) U | | 4.72 | 101 | (60-120) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.89 | 106 | | 4 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Isophorone 54 of 65 | MS (0.262) U | | 3.53 | 75 | (57-108) | | | 4.68 mg/Kg | 07/01/2010 |



SGS Ref.# 970657 Matrix Spike
 970658 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch XXX22944
 Method Sonication Extraction Soil SW8
 Date 07/01/2010

Original 1103166001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Naphthalene | MSD | | 3.56 | 77 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 3.28 | 70 | (51-105) | | | 4.68 mg/Kg | 07/01/2010 |
| Nitrobenzene | MSD | | 3.26 | 71 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 3.29 | 70 | (53-99) | | | 4.68 mg/Kg | 07/01/2010 |
| N-Nitrosodimethylamine | MSD | | 3.21 | 69 | | 3 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 2.55 | 55 | (45-90) | | | 4.68 mg/Kg | 07/01/2010 |
| N-Nitroso-di-n-propylamine | MSD | | 2.43 | 53 | | 4 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 3.19 | 68 | (59-100) | | | 4.68 mg/Kg | 07/01/2010 |
| N-Nitrosodiphenylamine | MSD | | 3.18 | 69 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 3.89 | 83 | (61-114) | | | 4.68 mg/Kg | 07/01/2010 |
| Pentachlorophenol | MSD | | 3.84 | 83 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (2.10) U | 7.13 | 109 | (56-117) | | | 6.55 mg/Kg | 07/01/2010 |
| Phenanthrene | MSD | | 7.09 | 109 | | 1 | (< 30) | 6.48 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 4.79 | 103 | (63-110) | | | 4.68 mg/Kg | 07/01/2010 |
| Phenol | MSD | | 4.82 | 104 | | 1 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 4.07 | 87 | (56-97) | | | 4.68 mg/Kg | 07/01/2010 |
| Pyrene | MSD | | 3.90 | 84 | | 4 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| | MS | (0.262) U | 4.79 | 103 | (70-123) | | | 4.68 mg/Kg | 07/01/2010 |
| | MSD | | 4.79 | 104 | | 0 | (< 30) | 4.62 mg/Kg | 07/02/2010 |
| Surrogates | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | MS | | 10.1 | 108 | (47-125) | | | | 07/01/2010 |
| | MSD | | 9.95 | 107 | | 2 | | | 07/02/2010 |
| 2-Fluorobiphenyl <surr> | MS | | 4.08 | 87 | (45-105) | | | | 07/01/2010 |
| | MSD | | 4.19 | 91 | | 3 | | | 07/02/2010 |
| 2-Fluorophenol <surr> | MS | | 5.62 | 60 | (41-84) | | | | 07/01/2010 |
| | MSD | | 5.84 | 63 | | 4 | | | 07/02/2010 |
| Nitrobenzene-d5 <surr> | MS | | 3.32 | 71 | (37-100) | | | | 07/01/2010 |
| | MSD | | 3.23 | 70 | | 3 | | | 07/02/2010 |
| Phenol-d6 <surr> | MS | | 7.18 | 77 | (48-94) | | | | 07/01/2010 |
| | MSD | | 6.99 | 76 | | 3 | | | 07/02/2010 |
| Terphenyl-d14 <surr> | MS | | 5.13 | 110 | (50-120) | | | | 07/01/2010 |
| | MSD | | 5.14 | 111 | | 0 | | | 07/02/2010 |

Batch XMS5496
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 970823 Matrix Spike
 970824 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch MXX23164
 Method Soils/Solids Digest for Metals b
 Date 07/01/2010

Original 1103150001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Metals by ICP/MS

| | | | | | | | | | |
|------|-----|-----|-----|----|-----------------|------------|--|------------|------------|
| Lead | MS | 305 | 423 | | 182* (80-120) | | | 64.5 mg/Kg | 07/02/2010 |
| | MSD | | 363 | 91 | | 15 (< 20) | | 64.1 mg/Kg | 07/02/2010 |

Batch MMS6504
 Method SW6020
 Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 970825 Bench Spike DIGESTED

Printed Date/Time 07/06/2010 16:51
Prep Batch MXX23164
Method Soils/Solids Digest for Metals b
Date 07/01/2010

Original 1103150001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Metals by ICP/MS

| | | | | | | | | | |
|------------|------------------------------|-----|------|----|------------|--|--|-----------|------------|
| Lead | BND | 305 | 1076 | 97 | (75-125) | | | 794 mg/Kg | 07/02/2010 |
| Batch | MMS6504 | | | | | | | | |
| Method | SW6020 | | | | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | | | | |



SGS Ref.# 971089 Matrix Spike
971090 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
Prep Batch
Method
Date

Original 971088
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:
1103166001, 1103166002, 1103166003, 1103166004, 1103166005

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971089 Matrix Spike
 971090 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch
 Method
 Date

Original 971088
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|----------|------|-----|------------|----|---------|------------|------------|
| 1,1,1,2-Tetrachloroethane | MS | (35.6) U | 1800 | 105 | (77-123) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1790 | 104 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1,1-Trichloroethane | MS | (35.6) U | 1900 | 111 | (77-129) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1870 | 109 | | 2 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (35.6) U | 1660 | 97 | (80-122) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1610 | 94 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1,2-Trichloroethane | MS | (35.6) U | 1760 | 103 | (85-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1720 | 100 | | 2 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1-Dichloroethane | MS | (35.6) U | 1660 | 97 | (81-126) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1580 | 93 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1-Dichloroethene | MS | (35.6) U | 1630 | 95 | (75-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1550 | 91 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,1-Dichloropropene | MS | (35.6) U | 1880 | 110 | (76-134) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1740 | 101 | | 8 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2,3-Trichlorobenzene | MS | (35.6) U | 1730 | 101 | (78-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1620 | 95 | | 7 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2,3-Trichloropropane | MS | (35.6) U | 1780 | 104 | (77-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1740 | 102 | | 2 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2,4-Trichlorobenzene | MS | (35.6) U | 1890 | 111 | (77-126) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1810 | 106 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2,4-Trimethylbenzene | MS | (35.6) U | 1790 | 104 | (85-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1720 | 100 | | 4 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (141) U | 1710 | 100 | (60-135) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1690 | 99 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2-Dibromoethane | MS | (35.6) U | 1870 | 109 | (85-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1710 | 100 | | 9 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2-Dichlorobenzene | MS | (35.6) U | 1800 | 105 | (88-113) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1750 | 102 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2-Dichloroethane | MS | (35.6) U | 1850 | 108 | (83-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1840 | 107 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,2-Dichloropropane | MS | (35.6) U | 1740 | 101 | (81-120) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1620 | 95 | | 7 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,3,5-Trimethylbenzene | MS | (35.6) U | 1920 | 112 | (87-120) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1740 | 101 | | 10 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,3-Dichlorobenzene | MS | (35.6) U | 1810 | 106 | (86-117) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1650 | 96 | | 9 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,3-Dichloropropane | MS | (35.6) U | 1690 | 98 | (84-123) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1610 | 94 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 1,4-Dichlorobenzene | MS | (35.6) U | 1810 | 106 | (86-118) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1730 | 101 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |



SGS Ref.# 971089 Matrix Spike
 971090 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch
 Method
 Date

Original 971088
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|----------|------|-----|------------|----|---------|------------|------------|
| 2,2-Dichloropropane | MS | (35.6) U | 1770 | 103 | (69-132) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1670 | 97 | | 6 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 2-Butanone (MEK) | MS | (356) U | 4720 | 92 | (57-135) | | | 5140 ug/Kg | 07/01/2010 |
| | MSD | | 4660 | 91 | | 1 | (< 20) | 5140 ug/Kg | 07/01/2010 |
| 2-Chlorotoluene | MS | (35.6) U | 1810 | 106 | (81-122) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1660 | 97 | | 9 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 2-Hexanone | MS | (356) U | 4550 | 89 | (58-145) | | | 5140 ug/Kg | 07/01/2010 |
| | MSD | | 4640 | 90 | | 2 | (< 20) | 5140 ug/Kg | 07/01/2010 |
| 4-Chlorotoluene | MS | (35.6) U | 1810 | 106 | (84-120) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1770 | 104 | | 2 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 4-Isopropyltoluene | MS | (35.6) U | 1790 | 105 | (83-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1670 | 98 | | 7 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (356) U | 5010 | 98 | (67-135) | | | 5140 ug/Kg | 07/01/2010 |
| | MSD | | 5490 | 107 | | 9 | (< 20) | 5140 ug/Kg | 07/01/2010 |
| Benzene | MS | (17.8) U | 1760 | 103 | (81-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1710 | 100 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Bromobenzene | MS | (35.6) U | 1880 | 110 | (86-119) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1720 | 101 | | 9 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Bromochloromethane | MS | (35.6) U | 1940 | 113 | (79-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1790 | 104 | | 8 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Bromodichloromethane | MS | (35.6) U | 1830 | 107 | (81-127) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1750 | 102 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Bromoform | MS | (35.6) U | 1590 | 93 | (72-135) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1710 | 100 | | 8 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Bromomethane | MS | (282) U | 1500 | 87 | (49-141) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1520 | 89 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Carbon disulfide | MS | (35.6) U | 2400 | 93 | (58-155) | | | 2570 ug/Kg | 07/01/2010 |
| | MSD | | 2260 | 88 | | 6 | (< 20) | 2570 ug/Kg | 07/01/2010 |
| Carbon tetrachloride | MS | (35.6) U | 1680 | 98 | (79-128) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1690 | 98 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Chlorobenzene | MS | (35.6) U | 1850 | 108 | (84-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1670 | 98 | | 11 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Chloroethane | MS | (282) U | 1900 | 111 | (51-141) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1580 | 92 | | 19 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Chloroform | MS | (35.6) U | 1840 | 108 | (77-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1770 | 103 | | 4 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Chloromethane | MS | (35.6) U | 1410 | 82 | (54-129) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1350 | 79 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| cis-1,2-Dichloroethene | MS | (35.6) U | 1770 | 104 | (82-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1650 | 96 | | 8 | (< 20) | 1710 ug/Kg | 07/01/2010 |



SGS Ref.# 971089 Matrix Spike
 971090 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch
 Method
 Date

Original 971088
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (35.6) U | 1840 | 107 | (82-122) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1790 | 104 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Dibromochloromethane | MS | (35.6) U | 1910 | 112 | (84-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1820 | 107 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Dibromomethane | MS | (35.6) U | 1780 | 104 | (80-123) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1780 | 104 | | 0 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Dichlorodifluoromethane | MS | (35.6) U | 1400 | 82 | (43-135) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1330 | 77 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Ethylbenzene | MS | (35.6) U | 1850 | 108 | (87-119) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1750 | 102 | | 6 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Hexachlorobutadiene | MS | (35.6) U | 1640 | 96 | (74-124) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1630 | 95 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Isopropylbenzene (Cumene) | MS | (35.6) U | 1830 | 107 | (89-121) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1730 | 101 | | 6 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Methylene chloride | MS | (141) U | 1720 | 101 | (63-137) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1700 | 99 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Methyl-t-butyl ether | MS | (35.6) U | 2470 | 96 | (76-133) | | | 2570 ug/Kg | 07/01/2010 |
| | MSD | | 2530 | 98 | | 2 | (< 20) | 2570 ug/Kg | 07/01/2010 |
| Naphthalene | MS | (68.4) U | 1610 | 94 | (73-131) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1660 | 97 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| n-Butylbenzene | MS | (35.6) U | 1780 | 104 | (82-127) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1550 | 90 | | 14 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| n-Propylbenzene | MS | (35.6) U | 1810 | 106 | (82-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1630 | 95 | | 11 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| o-Xylene | MS | (35.6) U | 1920 | 112 | (89-120) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1800 | 105 | | 7 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| P & M -Xylene | MS | (68.4) U | 3780 | 110 | (88-121) | | | 3430 ug/Kg | 07/01/2010 |
| | MSD | | 3430 | 100 | | 10 | (< 20) | 3430 ug/Kg | 07/01/2010 |
| sec-Butylbenzene | MS | (35.6) U | 1790 | 104 | (84-122) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1680 | 98 | | 6 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Styrene | MS | (35.6) U | 1840 | 108 | (91-120) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1810 | 105 | | 2 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| tert-Butylbenzene | MS | (35.6) U | 1660 | 97 | (82-122) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1680 | 98 | | 1 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Tetrachloroethene | MS | (35.6) U | 1750 | 102 | (82-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1670 | 97 | | 5 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| Toluene | MS | (35.6) U | 1830 | 107 | (87-119) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1660 | 97 | | 10 | (< 20) | 1710 ug/Kg | 07/01/2010 |
| trans-1,2-Dichloroethene | MS | (35.6) U | 1610 | 94 | (79-125) | | | 1710 ug/Kg | 07/01/2010 |
| | MSD | | 1560 | 91 | | 3 | (< 20) | 1710 ug/Kg | 07/01/2010 |



SGS Ref.# 971089 Matrix Spike
 971090 Matrix Spike Duplicate

Printed Date/Time 07/06/2010 16:51
 Prep Batch
 Method
 Date

Original 971088
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|----------|------|-----|------------|---|---------|------|------------------|
| trans-1,3-Dichloropropene | MS | (35.6) U | 1890 | 111 | (86-122) | | | 1710 | ug/Kg 07/01/2010 |
| | MSD | | 1800 | 105 | | 5 | (< 20) | 1710 | ug/Kg 07/01/2010 |
| Trichloroethene | MS | (35.6) U | 1810 | 105 | (77-124) | | | 1710 | ug/Kg 07/01/2010 |
| | MSD | | 1790 | 105 | | 1 | (< 20) | 1710 | ug/Kg 07/01/2010 |
| Trichlorofluoromethane | MS | (35.6) U | 1810 | 106 | (64-139) | | | 1710 | ug/Kg 07/01/2010 |
| | MSD | | 1780 | 104 | | 1 | (< 20) | 1710 | ug/Kg 07/01/2010 |
| Vinyl chloride | MS | (35.6) U | 1470 | 86 | (67-125) | | | 1710 | ug/Kg 07/01/2010 |
| | MSD | | 1370 | 80 | | 7 | (< 20) | 1710 | ug/Kg 07/01/2010 |
| Xylenes (total) | MS | (107) U | 5700 | 111 | (89-120) | | | 5140 | ug/Kg 07/01/2010 |
| | MSD | | 5220 | 102 | | 9 | (< 20) | 5140 | ug/Kg 07/01/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|------|-----|------------|----|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 1760 | 102 | (69-132) | | | | 07/01/2010 |
| | MSD | | 1760 | 103 | | 0 | | | 07/01/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 4340 | 100 | (65-144) | | | | 07/01/2010 |
| | MSD | | 3950 | 91 | | 10 | | | 07/01/2010 |
| Toluene-d8 <surr> | MS | | 1910 | 112 | (84-124) | | | | 07/01/2010 |
| | MSD | | 1790 | 104 | | 7 | | | 07/01/2010 |

Batch VMS11339
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA

1103166



Page 1 of 1
 Laboratory SGS
 Attn: Jennifer Serna

CHAIN-OF-CUSTODY

SHANNON & WILSON, INC.

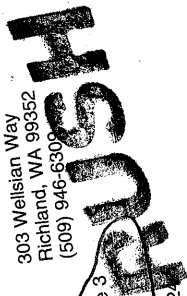
Geotechnical and Environmental Consultants
 400 N. 34th Street, Suite 100
 Seattle, WA 98103
 (206) 632-8020
 2055 Hill Road
 Fairbanks, AK 99709
 (907) 479-0600
 2255 S.W. Canyon Road
 Portland, OR 97201-2498
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2043 Westport Center Drive
 St. Louis, MO 63146-3564
 (314) 392-0966

5430 Fairbanks Street, Suite 3
 Anchorage, AK 99518
 (907) 561-2120

1200 17th Street, Suite 1024
 Denver, Co 80202
 (303) 825-3800



Analysis Parameters/Sample Container Description
 (include preservative if used)

| Comp. | Grab | VOCs 81608 EPA 81608 | SVOCs EPA 8210 NEMAS CS CAC, TR EPA 8210 | Soil | Remarks/Matrix |
|-------|------|-------------------------|---|------|----------------|
| X | X | X | X | 2 | Soil |
| X | X | X | X | 2 | Soil |
| X | X | X | X | 2 | Soil |
| X | X | X | X | 2 | Soil |

| Relinquished By: | Relinquished By: | Relinquished By: |
|--|--|--|
| Signature: <u>[Signature]</u> Printed Name: <u>BOCARLA GE</u> Company: <u>SGW</u> | Signature: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u> | Signature: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u> |
| Time: <u>16:15</u> | Time: <u>[Time]</u> | Time: <u>[Time]</u> |
| Date: <u>06-30</u> | Date: <u>[Date]</u> | Date: <u>[Date]</u> |
| Received By: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u> | Received By: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u> | Received By: <u>[Signature]</u> Printed Name: <u>[Signature]</u> Company: <u>[Signature]</u> |
| Time: <u>[Time]</u> | Time: <u>[Time]</u> | Time: <u>[Time]</u> |
| Date: <u>[Date]</u> | Date: <u>[Date]</u> | Date: <u>[Date]</u> |

| Sample Identity | Lab No. | Time | Date Sampled |
|-----------------|---------|-------|--------------|
| 17368-1 B1S2 | ① A-B | 13:40 | 06-30 |
| 17368-1 B1S3 | ② A-B | 13:55 | 06-30 |
| 17368-5 B1S4 | ③ A-B | 11:50 | 06-29 |
| 17368-9 B1S5 | ④ A-B | 10:03 | 06-29 |
| 17368-5-TB | ⑤ A | 11:20 | 06-29 |

Sample Receipt

Total Number of Containers: _____
 COC Seals/Intact? Y/N/NA _____
 Received Good Cond./Cold Delivery Method: _____
 (attach shipping bill, if any)

Project Information

Project Number: 32-1-017368
 Project Name: AK DOT
 Contact: Cher Lutz/HK/ps
 Ongoing Project? Yes No
 Sampler: 0XL

Instructions

Requested Turnaround Time: 3 day Rush
 Special Instructions: 1117 deliverables



SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|--|--|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | Yes No <u>N/A</u> <u>Yes</u> No N/A <u>Yes</u> No N/A | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: <u>1</u> @ <u>2.0</u> w/ Therm.ID: <u>11D</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | <u>Yes</u> No <u>N/A</u> Yes No <u>N/A</u> | |
| Delivery method (specify all that apply): <u>Client</u> USPS Alert Courier Road Runner AK Air Lynden Carlile ERA FedEx UPS NAC PenAir Other: | Note airbill/tracking # See Attached <u>or N/A</u> | |
| * For samples received with payment, note amount (\$) and cash / check / CC (circle one). * For samples received in FBKS, ANCH staff will verify all criteria are reviewed. | | <u>N/A</u> <u>N/A</u> |
| Do samples match COC (i.e., sample IDs, dates/times collected)? Are analyses requested unambiguous? | Yes <u>No</u> N/A <u>Yes</u> No N/A | Sample label 1A is 6 min over on jar compared to time on COC protocol w/ analysis per PM |
| Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): <u>Bubble wrap</u> Separate plastic bags Vermiculite Other: | <u>Yes</u> No N/A | |
| Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB? | Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| Were proper containers (type/mass/volume/preservative) used? Were the bottles provided by SGS? (Note apparent exceptions.) Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? | <u>Yes</u> No N/A <u>Yes</u> No N/A <u>Yes</u> No N/A | |
| For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F066) for documentation.</i> | Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| For RUSH or SHORT HOLD TIME samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified? | <u>Yes</u> No N/A | |
| For client requested, site-specific QC (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly? | Yes No <u>N/A</u> | |
| For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? | Yes No <u>N/A</u> | |
| Was PEER REVIEW of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, each container had a unique container ID)? | <u>Yes</u> No N/A | SRF Completed by: <u>SH</u> Bottle Sheet by: <u>SH</u> |
| Was the WO# recorded in Front Counter/Sample Receiving log? | Yes No N/A | Peer Reviewed by: <u>[Signature]</u> |
| For any questions answered "NO," was the PM notified? | <u>Yes</u> No N/A | PM = <u>JS</u> N/A |
| Additional notes (if applicable): Client included 12, 4oz jars w/ methanol for disposal <u>SH</u> <u>Del 7/10/10.</u> | | |

| WO# (7 digits) | Sample # | Sample # | Container ID | Container ID | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|----------|----------|--------------|--------------|--------|------------|------------------------|-------------|--------------|--|
| | | | | | | | | | | |
| 1103166 | 001 | 004 | A | A | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103166 | 001 | 004 | B | B | 2 Soil | | MeOH+BFB * | S_GRO/VOC | | |
| 1103166 | 005 | 005 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GRO/VOC | | |
| | | | | | | | | | | |

1103166



LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 19, 2010

Laboratory Report Date: July 6, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103166

ADEC File Number: Silvertip 2315.26.002; Nelchina 2244.26.001 and 2244.26.002;
Slana 212.26.001

(NOTE: *NA* = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA Yes / No

Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? *NA / **Yes** / No*

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / No

Comments: *The laboratory noted no problems.*

- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? *NA / **Yes** / No*

Comments: *A six minute collection time discrepancy of the sample label and COC of Sample B1S2 was noted by the laboratory.*

- e. Data quality or usability affected? Explain. **NA**

Comments: *Collection time indicated on COC was used for laboratory report.*

4. Case Narrative

- a. Present and understandable? **Yes** / No

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? *None Noted / **Yes***

Comments: *For MS/MSD recovery discrepancies see section 6.b. ICV recoveries of VOCs dichlorodifluoromethane and vinyl chloride are biased high.*

- c. Were corrective actions documented? **None Noted** / Yes

Comments:

- d. What is the effect on data quality/usability, according to the case narrative? **NA**

Comments: *Dichlorodifluoromethane and vinyl chloride were not detected above the PQL in associated project samples.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No

Comments:

- b. All applicable holding times met? **Yes** / No

Comments:

- c. All soils reported on a dry-weight basis? *NA / **Yes** / No*

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? Yes **No**

Comments: *The PQLs for multiple VOC and SVOC compounds are greater than the respective cleanup levels.*

- e. Data quality or usability affected? Explain. *NA*

Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) *N/A* / **Yes** / No

Comments: *LCS only; MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? *NA* / **Yes** / No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the

laboratory QC pages) Yes **No**

Comments: *MS/MSD recoveries of multiple SVOCs are outside QC criteria. Sample results are considered unaffected because the subject SVOCs were not detected in the project samples.*

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) Yes **No**

Comments: *MS/MSD RPDs for several SVOCs are outside QC criteria.*

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**
Comments: *Sample results are considered unaffected because the subject SVOCs were not detected in the project samples.*

- vi. Do the affected samples(s) have data flags? **NA** / Yes / No
Comments:

If so, are the data flags clearly defined? **NA** / Yes / No
Comments:

- vii. Data quality or usability affected? Explain. **NA**
Comments: *LCS recoveries of analytes with MS/MSD recovery discrepancies are within limits, and accuracy is considered acceptable; the SVOCs with MS/MSD RPD discrepancies were not detected in the associated project samples at concentrations greater than their respective PQLs; the precision of the analyte results in the project samples associated with the MS/MSD RPD discrepancies is considered unaffected for the purposes of this report.*

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **NA** / **Yes** / No
Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **NA** / **Yes** / No
Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / Yes / No
Comments:

If so, are the data flags clearly defined? **NA** / Yes / No
Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

i. One trip blank reported per matrix, analysis and cooler? **NA** / **Yes** / **No**
Comments:

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **NA** / **Yes** / **No** (if no explain):

iii. All results less than PQL? **NA** / **Yes** / **No**
Comments:

iv. If above PQL, what samples are affected? **NA**
Comments:

v. Data quality or usability affected? Explain. **NA**
Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / **No**
Comments: *Primary/duplicate sample pair is B1S2/B1S3.*

ii. Were the field duplicates submitted blind to the lab? **NA** / **Yes** / **No**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) **NA** / **Yes** / **No**
Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments: *No.*

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

NA / **Yes** / **No**
Comments: An EB was not included in the scope of this project.

i. All results less than PQL? **NA** / **Yes** / **No**
Comments:

ii. If results are above PQL, what samples are affected? **NA**

Work Order Number: 1103166

Comments:

iii. Data quality or usability affected? Explain. **NA**

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

a. Are they defined and appropriate? *NA* / **Yes** / *No*

Comments: *Data flags/qualifiers are on page following case narrative.*



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 17368-3 ADOT Inj
Client: Shannon & Wilson, Inc.
SGS Work Order: 1103184

Released by:

Contents (Bookmarked in PDF):

Cover Page
Case Narrative
Sample Results Forms
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1103184 17368-3 ADOT Inj

Printed Date/Time 7/16/2010 15:22

Sample ID Client Sample ID

Refer to the sample receipt form for information on sample condition.

- 1103184001 PS 17368-3-B1S2**
8260B - CCV/ICV recovery for dichlorodifluoromethane does not meet QC criteria (biased high). Sample result may be estimated.
- 971779 *MSD 1103184002B(971777MSD)**
8260B - MS/MSD does not meet RPD criteria for chloroform. This analyte was not detected above the LOQ in the associated samples.
- 971785 *CCV CCV for HBN 494580 [VMS/11348]**
8260B - ICV recovery for chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
8260B - CCV recovery for dichlorodifluoromethane does not meet QC criteria (biased high).
8260B - ICV recovery for dichlorodifluoromethane does not meet QC criteria (biased high).
- 972388 *MS 17368-2B1S2(1103191001MS)**
8270D - MS recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.
- 972389 *MSD 17368-2B1S2(1103191001MSD)**
8270D - MSD recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.
8270D - MS/MSD RPD for multiple analytes does not meet QC criteria. These analytes were not detected above the LOQ in the parent sample.

Haydar Turker
Shannon & Wilson, Inc.
5430 Fairbanks St., Suite 3
Anchorage, AK 99518

Work Order: 1103184
17368-3 ADOT Inj
Client: Shannon & Wilson, Inc.
Report Date: July 16, 2010

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (http://www.sgs.com/terms_and_conditions.htm), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

- * The analyte has exceeded allowable regulatory or control limits.
- ! Surrogate out of control limits.
- B Indicates the analyte is found in a blank associated with the sample.
- CCV Continuing Calibration Verification
- CL Control Limit
- D The analyte concentration is the result of a dilution.
- DF Dilution Factor
- DL Detection Limit (i.e., maximum method detection limit)
- E The analyte result is above the calibrated range.
- F Indicates value that is greater than or equal to the DL
- GT Greater Than
- ICV Initial Calibration Verification
- J The quantitation is an estimation.
- JL The analyte was positively identified, but the quantitation is a low estimation.
- LCS(D) Laboratory Control Spike (Duplicate)
- LOD Limit of Detection (i.e., 2xDL)
- LOQ Limit of Quantitation (i.e., reporting or practical quantitation limit)
- LT Less Than
- M A matrix effect was present.
- MB Method Blank
- MS(D) Matrix Spike (Duplicate)
- ND Indicates the analyte is not detected.
- Q QC parameter out of acceptance range.
- R Rejected
- RPD Relative Percent Difference
- U Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



Detectable Results Summary

Print Date: 7/16/2010 3:22 pm

Client Sample ID: **17368-3-B1S2**

SGS Ref. #: 1103184001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 7.72 | mg/Kg |
| Chromium | 26.5 | mg/Kg |
| Lead | 6.93 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|-------------------------|------|-------|
| 4-Isopropyltoluene | 193 | ug/Kg |
| Dichlorodifluoromethane | 230 | ug/Kg |
| Trichloroethene | 62.6 | ug/Kg |

Client Sample ID: **17368-3-B2S2**

SGS Ref. #: 1103184002

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 9.98 | mg/Kg |
| Chromium | 28.5 | mg/Kg |
| Lead | 7.77 | mg/Kg |



SGS Ref.# 1103184001
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:55
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

Sample Remarks:

8260B - CCV/ICV recovery for dichlorodifluoromethane does not meet QC criteria (biased high). Sample result may be estimated.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 7.72 | 1.46 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.291 U | 0.291 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 26.5 | 0.582 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 6.93 | 0.291 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,1-Trichloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,2-Trichloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloroethene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloropropene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,3-Trichlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,3-Trichloropropane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,4-Trichlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,4-Trimethylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 239 U | 239 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dibromoethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichloroethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichloropropane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3,5-Trimethylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3-Dichlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3-Dichloropropane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,4-Dichlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 2,2-Dichloropropane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |



SGS Ref.# 1103184001
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:55
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 596 U | 596 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 2-Chlorotoluene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 2-Hexanone | 596 U | 596 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Chlorotoluene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Isopropyltoluene | 193 | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 596 U | 596 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Benzene | 29.8 U | 29.8 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromochloromethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromodichloromethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromoform | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromomethane | 477 U | 477 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Carbon disulfide | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Carbon tetrachloride | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chlorobenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloroethane | 477 U | 477 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloroform | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloromethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| cis-1,2-Dichloroethene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| cis-1,3-Dichloropropene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dibromochloromethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dibromomethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dichlorodifluoromethane | 230 | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Ethylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Hexachlorobutadiene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Isopropylbenzene (Cumene) | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Methylene chloride | 239 U | 239 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Methyl-t-butyl ether | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Naphthalene | 119 U | 119 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| n-Butylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |



SGS Ref.# 1103184001
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:55
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| o-Xylene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| P & M -Xylene | 119 U | 119 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| sec-Butylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Styrene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| tert-Butylbenzene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Tetrachloroethene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Toluene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| trans-1,2-Dichloroethene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| trans-1,3-Dichloropropene | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Trichloroethene | 62.6 | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Trichlorofluoromethane | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Vinyl chloride | 59.6 U | 59.6 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Xylenes (total) | 179 U | 179 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 106 | | % | SW8260B | B | 69-132 | | 07/04/10 | DSH |
| 4-Bromofluorobenzene <surr> | 103 | | % | SW8260B | B | 65-144 | | 07/04/10 | DSH |
| Toluene-d8 <surr> | 116 | | % | SW8260B | B | 84-124 | | 07/04/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,2-Dichlorobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,3-Dichlorobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,4-Dichlorobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,5-Trichlorophenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,6-Trichlorophenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dichlorophenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dimethylphenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dinitrophenol | 4.58 U | 4.58 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103184001
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:55
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,6-Dinitrotoluene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chloronaphthalene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chlorophenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 3.06 U | 3.06 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylnaphthalene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitroaniline | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitrophenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.53 U | 1.53 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3,3-Dichlorobenzidine | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3-Nitroaniline | 0.764 U | 0.764 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Bromophenyl-phenylether | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloro-3-methylphenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloroaniline | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitroaniline | 4.58 U | 4.58 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitrophenol | 1.53 U | 1.53 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthylene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Aniline | 3.06 U | 3.06 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Anthracene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Azobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo(a)Anthracene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[a]pyrene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[b]Fluoranthene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[g,h,i]perylene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[k]fluoranthene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzoic acid | 2.29 U | 2.29 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzyl alcohol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



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Collected Date/Time 06/30/2010 14:55
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Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Butylbenzylphthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Chrysene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzo[a,h]anthracene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzofuran | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Diethylphthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dimethylphthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Di-n-butylphthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| di-n-Octylphthalate | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluoranthene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluorene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobutadiene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorocyclopentadiene | 1.07 U | 1.07 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachloroethane | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Isophorone | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Naphthalene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodimethylamine | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodiphenylamine | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pentachlorophenol | 3.06 U | 3.06 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenanthrene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenol | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pyrene | 0.382 U | 0.382 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |

Surrogates



SGS Ref.# 1103184001
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B1S2
Matrix Soil/Solid (dry weight)

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| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 91.3 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorobiphenyl <surr> | 76.8 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorophenol <surr> | 54.9 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene-d5 <surr> | 59.1 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/11/10 | JDH |
| Phenol-d6 <surr> | 62.5 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/11/10 | JDH |
| Terphenyl-d14 <surr> | 100 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/11/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 65.0 | | % | SM20 2540G | A | | | 07/01/10 | AHJ |



SGS Ref.# 1103184002
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-B2S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 16:20
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 9.98 | 1.24 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.248 U | 0.248 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 28.5 | 0.496 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 7.77 | 0.248 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,1-Trichloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1,2-Trichloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloroethene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,1-Dichloropropene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,3-Trichlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,3-Trichloropropane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,4-Trichlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2,4-Trimethylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 214 U | 214 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dibromoethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichloroethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,2-Dichloropropane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3,5-Trimethylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3-Dichlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,3-Dichloropropane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 1,4-Dichlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |
| 2,2-Dichloropropane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | 07/04/10 | DSH |



SGS Ref.# 1103184002
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Project Name/# 17368-3 ADOT Inj
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Matrix Soil/Solid (dry weight)

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Collected Date/Time 06/30/2010 16:20
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 535 U | 535 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 2-Chlorotoluene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 2-Hexanone | 535 U | 535 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Chlorotoluene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Isopropyltoluene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 535 U | 535 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Benzene | 26.7 U | 26.7 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromochloromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromodichloromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromoform | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Bromomethane | 428 U | 428 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Carbon disulfide | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Carbon tetrachloride | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chlorobenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloroethane | 428 U | 428 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloroform | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Chloromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| cis-1,2-Dichloroethene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| cis-1,3-Dichloropropene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dibromochloromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dibromomethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Dichlorodifluoromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Ethylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Hexachlorobutadiene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Isopropylbenzene (Cumene) | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Methylene chloride | 214 U | 214 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Methyl-t-butyl ether | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Naphthalene | 107 U | 107 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| n-Butylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |



SGS Ref.# 1103184002
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Client Sample ID 17368-3-B2S2
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Collected Date/Time 06/30/2010 16:20
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| o-Xylene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| P & M -Xylene | 107 U | 107 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| sec-Butylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Styrene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| tert-Butylbenzene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Tetrachloroethene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Toluene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| trans-1,2-Dichloroethene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| trans-1,3-Dichloropropene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Trichloroethene | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Trichlorofluoromethane | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Vinyl chloride | 53.5 U | 53.5 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| Xylenes (total) | 160 U | 160 | ug/Kg | SW8260B | B | | | 07/04/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 108 | | % | SW8260B | B | 69-132 | | 07/04/10 | DSH |
| 4-Bromofluorobenzene <surr> | 112 | | % | SW8260B | B | 65-144 | | 07/04/10 | DSH |
| Toluene-d8 <surr> | 112 | | % | SW8260B | B | 84-124 | | 07/04/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,2-Dichlorobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,3-Dichlorobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,4-Dichlorobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,5-Trichlorophenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,6-Trichlorophenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dichlorophenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dimethylphenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dinitrophenol | 3.81 U | 3.81 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103184002
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Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,6-Dinitrotoluene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chloronaphthalene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chlorophenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.54 U | 2.54 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylnaphthalene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitroaniline | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitrophenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.27 U | 1.27 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3,3-Dichlorobenzidine | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3-Nitroaniline | 0.636 U | 0.636 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Bromophenyl-phenylether | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloro-3-methylphenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloroaniline | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitroaniline | 3.81 U | 3.81 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitrophenol | 1.27 U | 1.27 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthylene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Aniline | 2.54 U | 2.54 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Anthracene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Azobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo(a)Anthracene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[a]pyrene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[b]Fluoranthene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[g,h,i]perylene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[k]fluoranthene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzoic acid | 1.91 U | 1.91 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzyl alcohol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



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Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Butylbenzylphthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Chrysene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzo[a,h]anthracene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzofuran | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Diethylphthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dimethylphthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Di-n-butylphthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| di-n-Octylphthalate | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluoranthene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluorene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobutadiene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorocyclopentadiene | 0.890 U | 0.890 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachloroethane | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Isophorone | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Naphthalene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodimethylamine | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodiphenylamine | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pentachlorophenol | 2.54 U | 2.54 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenanthrene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenol | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pyrene | 0.318 U | 0.318 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |

Surrogates



SGS Ref.# 1103184002
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Matrix Soil/Solid (dry weight)

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|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 87.8 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorobiphenyl <surr> | 79.6 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorophenol <surr> | 66.7 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene-d5 <surr> | 66 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/11/10 | JDH |
| Phenol-d6 <surr> | 68.1 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/11/10 | JDH |
| Terphenyl-d14 <surr> | 96.7 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/11/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 78.6 | | % | SM20 2540G | A | | | 07/01/10 | AHJ |



SGS Ref.# 1103184003
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-STB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:00
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,1-Trichloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,2-Trichloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloroethene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloropropene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,3-Trichlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,3-Trichloropropane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,4-Trichlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,4-Trimethylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 98.5 U | 98.5 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dibromoethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichloroethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichloropropane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3,5-Trimethylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3-Dichlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3-Dichloropropane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,4-Dichlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2,2-Dichloropropane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Butanone (MEK) | 246 U | 246 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Chlorotoluene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Hexanone | 246 U | 246 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Chlorotoluene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Isopropyltoluene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 246 U | 246 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Benzene | 12.3 U | 12.3 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |



SGS Ref.# 1103184003
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-STB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:00
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromochloromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromodichloromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromoform | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromomethane | 197 U | 197 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Carbon disulfide | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Carbon tetrachloride | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chlorobenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloroethane | 197 U | 197 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloroform | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| cis-1,2-Dichloroethene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| cis-1,3-Dichloropropene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dibromochloromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dibromomethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dichlorodifluoromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Ethylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Hexachlorobutadiene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Isopropylbenzene (Cumene) | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Methylene chloride | 98.5 U | 98.5 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Methyl-t-butyl ether | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Naphthalene | 49.2 U | 49.2 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| n-Butylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| n-Propylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| o-Xylene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| P & M -Xylene | 49.2 U | 49.2 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| sec-Butylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Styrene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| tert-Butylbenzene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Tetrachloroethene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |



SGS Ref.# 1103184003
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Client Sample ID 17368-3-STB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Collected Date/Time 06/30/2010 14:00
Received Date/Time 07/01/2010 9:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Toluene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| trans-1,2-Dichloroethene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| trans-1,3-Dichloropropene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Trichloroethene | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Trichlorofluoromethane | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Vinyl chloride | 24.6 U | 24.6 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Xylenes (total) | 73.9 U | 73.9 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 111 | | % | SW8260B | A | 69-132 | | 07/04/10 | DSH |
| 4-Bromofluorobenzene <surr> | 96.3 | | % | SW8260B | A | 65-144 | | 07/04/10 | DSH |
| Toluene-d8 <surr> | 109 | | % | SW8260B | A | 84-124 | | 07/04/10 | DSH |



SGS Ref.# 970868 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch
Method
Date

QC results affect the following production samples:
1103184001, 1103184002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 07/01/10 |
| Batch | SPT8173 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 971126 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

QC results affect the following production samples:
1103184001, 1103184002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/06/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/06/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971775 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch
Method
Date

QC results affect the following production samples:
1103184001, 1103184002, 1103184003

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971775 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|--------|------|------|-------|----------|
| 1,1,1,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,1-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,2,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,2-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,3-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,3-Trichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,4-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,4-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dibromo-3-chloropropane | 62.0 U | 100 | 31.0 | ug/Kg | 07/04/10 |
| 1,2-Dibromoethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3,5-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,4-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2-Butanone (MEK) | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| 2-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2-Hexanone | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| 4-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 4-Isopropyltoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 4-Methyl-2-pentanone (MIBK) | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| Benzene | 7.80 U | 12.5 | 3.90 | ug/Kg | 07/04/10 |
| Bromobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromodichloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromoform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromomethane | 124 U | 200 | 62.0 | ug/Kg | 07/04/10 |
| Carbon disulfide | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Carbon tetrachloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chloroethane | 124 U | 200 | 62.0 | ug/Kg | 07/04/10 |
| Chloroform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |



SGS Ref.# 971775 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|--------|------|------|-------|----------|
| cis-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| cis-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dibromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dibromomethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dichlorodifluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Ethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Hexachlorobutadiene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Isopropylbenzene (Cumene) | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Methylene chloride | 62.0 U | 100 | 31.0 | ug/Kg | 07/04/10 |
| Methyl-t-butyl ether | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Naphthalene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/04/10 |
| n-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| n-Propylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| o-Xylene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| P & M -Xylene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/04/10 |
| sec-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Styrene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| tert-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Tetrachloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Toluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| trans-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| trans-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Trichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Trichlorofluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Vinyl chloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Xylenes (total) | 47.0 U | 75.0 | 23.5 | ug/Kg | 07/04/10 |

Surrogates

| | | | | | |
|------------------------------|-----|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 110 | 69-132 | | % | 07/04/10 |
| 4-Bromofluorobenzene <surr> | 107 | 65-144 | | % | 07/04/10 |
| Toluene-d8 <surr> | 110 | 84-124 | | % | 07/04/10 |

Batch VMS11348
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

QC results affect the following production samples:
1103184001, 1103184002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch Method XXX23007
Date SW3550C
 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|-------------------------------|---------|-------|--------|-------|----------|
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/10/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/10/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|--------------------------------|---------|-------|--------|-------|----------|
| Bis(2chloro 1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/10/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 89.7 | 47-125 | | % | 07/10/10 |
| 2-Fluorobiphenyl <surr> | 78.6 | 45-105 | | % | 07/10/10 |
| 2-Fluorophenol <surr> | 75.6 | 41-84 | | % | 07/10/10 |
| Nitrobenzene-d5 <surr> | 70.7 | 37-100 | | % | 07/10/10 |
| Phenol-d6 <surr> | 74.2 | 48-94 | | % | 07/10/10 |
| Terphenyl-d14 <surr> | 108 | 50-120 | | % | 07/10/10 |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

Batch XMS5509
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 970869 Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Original 1103180004
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
Prep **Batch**
Method
Date

QC results affect the following production samples:
 1103184001, 1103184002

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|-------------------|------------|------|---|---|--------|------------|
| Total Solids | 84.9 | 83.4 | % | 2 | (< 15) | 07/01/2010 |
| Batch | SPT8173 | | | | | |
| Method | SM20 2540G | | | | | |
| Instrument | | | | | | |



SGS Ref.# 971127 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
1103184001, 1103184002

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | |
| Arsenic | LCS | 48.6 | 97 | (80-120) | | | 50 mg/Kg | 07/06/2010 |
| Cadmium | LCS | 4.72 | 94 | (80-120) | | | 5 mg/Kg | 07/06/2010 |
| Chromium | LCS | 18.9 | 95 | (80-120) | | | 20 mg/Kg | 07/06/2010 |
| Lead | LCS | 47.1 | 94 | (80-120) | | | 50 mg/Kg | 07/06/2010 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971776 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Method
Date

QC results affect the following production samples:

1103184001, 1103184002, 1103184003

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971776 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 860 | 115 | (77-123) | | | 750 ug/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | LCS | 761 | 101 | (77-129) | | | 750 ug/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 800 | 107 | (80-122) | | | 750 ug/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | LCS | 831 | 111 | (85-121) | | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethane | LCS | 764 | 102 | (81-126) | | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethene | LCS | 796 | 106 | (75-125) | | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloropropene | LCS | 800 | 107 | (76-134) | | | 750 ug/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | LCS | 810 | 108 | (78-124) | | | 750 ug/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | LCS | 800 | 107 | (77-125) | | | 750 ug/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | LCS | 806 | 107 | (77-126) | | | 750 ug/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | LCS | 768 | 102 | (85-121) | | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 687 | 92 | (60-135) | | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dibromoethane | LCS | 864 | 115 | (85-124) | | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | LCS | 747 | 100 | (88-113) | | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichloroethane | LCS | 777 | 104 | (83-121) | | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichloropropane | LCS | 815 | 109 | (81-120) | | | 750 ug/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | LCS | 811 | 108 | (87-120) | | | 750 ug/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | LCS | 768 | 102 | (86-117) | | | 750 ug/Kg | 07/04/2010 |
| 1,3-Dichloropropane | LCS | 812 | 108 | (84-123) | | | 750 ug/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | LCS | 788 | 105 | (86-118) | | | 750 ug/Kg | 07/04/2010 |
| 2,2-Dichloropropane | LCS | 790 | 105 | (69-132) | | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971776 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch Method Date

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| 2-Butanone (MEK) | LCS | 1980 | 88 | (57-135) | | 2250 ug/Kg | 07/04/2010 |
| 2-Chlorotoluene | LCS | 777 | 104 | (81-122) | | 750 ug/Kg | 07/04/2010 |
| 2-Hexanone | LCS | 2350 | 104 | (58-145) | | 2250 ug/Kg | 07/04/2010 |
| 4-Chlorotoluene | LCS | 789 | 105 | (84-120) | | 750 ug/Kg | 07/04/2010 |
| 4-Isopropyltoluene | LCS | 796 | 106 | (83-121) | | 750 ug/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2530 | 113 | (67-135) | | 2250 ug/Kg | 07/04/2010 |
| Benzene | LCS | 808 | 108 | (81-124) | | 750 ug/Kg | 07/04/2010 |
| Bromobenzene | LCS | 796 | 106 | (86-119) | | 750 ug/Kg | 07/04/2010 |
| Bromochloromethane | LCS | 827 | 110 | (79-125) | | 750 ug/Kg | 07/04/2010 |
| Bromodichloromethane | LCS | 787 | 105 | (81-127) | | 750 ug/Kg | 07/04/2010 |
| Bromoform | LCS | 872 | 116 | (72-135) | | 750 ug/Kg | 07/04/2010 |
| Bromomethane | LCS | 696 | 93 | (49-141) | | 750 ug/Kg | 07/04/2010 |
| Carbon disulfide | LCS | 1030 | 91 | (58-155) | | 1130 ug/Kg | 07/04/2010 |
| Carbon tetrachloride | LCS | 792 | 106 | (79-128) | | 750 ug/Kg | 07/04/2010 |
| Chlorobenzene | LCS | 860 | 115 | (84-121) | | 750 ug/Kg | 07/04/2010 |
| Chloroethane | LCS | 789 | 105 | (51-141) | | 750 ug/Kg | 07/04/2010 |
| Chloroform | LCS | 799 | 107 | (77-124) | | 750 ug/Kg | 07/04/2010 |
| Chloromethane | LCS | 791 | 105 | (54-129) | | 750 ug/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | LCS | 788 | 105 | (82-124) | | 750 ug/Kg | 07/04/2010 |
| cis-1,3-Dichloropropene | LCS | 821 | 109 | (82-122) | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971776 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Dibromochloromethane | LCS | 869 | 116 | (84-125) | | | 750 ug/Kg | 07/04/2010 |
| Dibromomethane | LCS | 800 | 107 | (80-123) | | | 750 ug/Kg | 07/04/2010 |
| Dichlorodifluoromethane | LCS | 949 | 127 | (43-135) | | | 750 ug/Kg | 07/04/2010 |
| Ethylbenzene | LCS | 875 | 117 | (87-119) | | | 750 ug/Kg | 07/04/2010 |
| Hexachlorobutadiene | LCS | 836 | 111 | (74-124) | | | 750 ug/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | LCS | 828 | 110 | (89-121) | | | 750 ug/Kg | 07/04/2010 |
| Methylene chloride | LCS | 760 | 101 | (63-137) | | | 750 ug/Kg | 07/04/2010 |
| Methyl-t-butyl ether | LCS | 1180 | 105 | (76-133) | | | 1130 ug/Kg | 07/04/2010 |
| Naphthalene | LCS | 688 | 92 | (73-131) | | | 750 ug/Kg | 07/04/2010 |
| n-Butylbenzene | LCS | 780 | 104 | (82-127) | | | 750 ug/Kg | 07/04/2010 |
| n-Propylbenzene | LCS | 768 | 102 | (82-125) | | | 750 ug/Kg | 07/04/2010 |
| o-Xylene | LCS | 858 | 114 | (89-120) | | | 750 ug/Kg | 07/04/2010 |
| P & M -Xylene | LCS | 1700 | 113 | (88-121) | | | 1500 ug/Kg | 07/04/2010 |
| sec-Butylbenzene | LCS | 789 | 105 | (84-122) | | | 750 ug/Kg | 07/04/2010 |
| Styrene | LCS | 860 | 115 | (91-120) | | | 750 ug/Kg | 07/04/2010 |
| tert-Butylbenzene | LCS | 759 | 101 | (82-122) | | | 750 ug/Kg | 07/04/2010 |
| Tetrachloroethene | LCS | 873 | 116 | (82-125) | | | 750 ug/Kg | 07/04/2010 |
| Toluene | LCS | 819 | 109 | (87-119) | | | 750 ug/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | LCS | 846 | 113 | (79-125) | | | 750 ug/Kg | 07/04/2010 |
| trans-1,3-Dichloropropene | LCS | 836 | 111 | (86-122) | | | 750 ug/Kg | 07/04/2010 |
| Trichloroethene | LCS | 798 | 106 | (77-124) | | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971776 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
 Prep Batch

Client Name Shannon & Wilson, Inc.
 Project Name/# 17368-3 ADOT Inj
 Matrix Soil/Solid (dry weight)

Method
 Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-----|-----|------------|--|-----------|------------|
| Trichlorofluoromethane | LCS | 773 | 103 | (64-139) | | 750 ug/Kg | 07/04/2010 |
|------------------------|-----|-----|-----|------------|--|-----------|------------|

| | | | | | | | |
|----------------|-----|-----|-----|------------|--|-----------|------------|
| Vinyl chloride | LCS | 862 | 115 | (67-125) | | 750 ug/Kg | 07/04/2010 |
|----------------|-----|-----|-----|------------|--|-----------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2550 | 114 | (89-120) | | 2250 ug/Kg | 07/04/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|-----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 104 | (69-132) | | | 07/04/2010 |
|------------------------------|-----|--|-----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 101 | (65-144) | | | 07/04/2010 |
|-----------------------------|-----|--|-----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 114 | (84-124) | | | 07/04/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11348
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

Client Name Shannon & Wilson, Inc.
Project Name/# 17368-3 ADOT Inj
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
1103184001, 1103184002

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

Client Name Shannon & Wilson, Inc.
 Project Name/# 17368-3 ADOT Inj
 Matrix Soil/Solid (dry weight)

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 3.20 | 72 | (54-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | LCS | 3.15 | 71 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | LCS | 3.05 | 69 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | LCS | 3.02 | 68 | (51-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | LCS | 3.85 | 87 | (71-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.83 | 86 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | LCS | 3.34 | 75 | (64-107) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | LCS | 3.46 | 78 | (63-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | LCS | 6.99 | 87 | (43-130) | | | 8 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | LCS | 4.47 | 101 | (64-115) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | LCS | 4.09 | 92 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | LCS | 3.18 | 72 | (52-103) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | LCS | 3.22 | 72 | (56-94) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.43 | 105 | (51-131) | | | 8 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | LCS | 3.52 | 79 | (61-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.20 | 72 | (61-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | LCS | 4.07 | 92 | (70-120) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | LCS | 3.39 | 76 | (65-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.91 | 79 | (65-105) | | | 6.22 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.29 | 97 | (49-128) | | | 4.44 mg/Kg | 07/10/2010 |
| 3-Nitroaniline | LCS | 4.15 | 93 | (66-110) | | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample
 Client Name Shannon & Wilson, Inc.
 Project Name/# 17368-3 ADOT Inj
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 4-Bromophenyl-phenylether | LCS | 3.39 | 76 | (53-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.70 | 83 | (69-114) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | LCS | 3.24 | 73 | (58-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.69 | 83 | (53-110) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | LCS | 4.11 | 92 | (63-115) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | LCS | 6.19 | 100 | (44-137) | | 6.22 mg/Kg | 07/10/2010 |
| Acenaphthene | LCS | 3.76 | 85 | (57-110) | | 4.44 mg/Kg | 07/10/2010 |
| Acenaphthylene | LCS | 3.79 | 85 | (56-105) | | 4.44 mg/Kg | 07/10/2010 |
| Aniline | LCS | 2.65 | 60 | (40-92) | | 4.44 mg/Kg | 07/10/2010 |
| Anthracene | LCS | 4.18 | 94 | (65-105) | | 4.44 mg/Kg | 07/10/2010 |
| Azobenzene | LCS | 4.01 | 90 | (54-120) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | LCS | 4.35 | 98 | (72-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | LCS | 4.51 | 101 | (71-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | LCS | 4.30 | 97 | (70-115) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | LCS | 4.72 | 106 | (52-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | LCS | 4.17 | 94 | (66-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzoic acid | LCS | 3.42 | 55 | (25-76) | | 6.22 mg/Kg | 07/10/2010 |
| Benzyl alcohol | LCS | 3.43 | 77 | (61-110) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 3.20 | 72 | (50-97) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethoxy)methane | LCS | 3.44 | 77 | (57-104) | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

Client Name Shannon & Wilson, Inc.
 Project Name/# 17368-3 ADOT Inj
 Matrix Soil/Solid (dry weight)

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| Bis(2-Chloroethyl)ether | LCS | 3.09 | 70 | (49-91) | | | 4.44 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.73 | 106 | (62-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | LCS | 4.77 | 107 | (69-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Chrysene | LCS | 4.38 | 99 | (72-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.82 | 108 | (61-125) | | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzofuran | LCS | 3.86 | 87 | (60-105) | | | 4.44 mg/Kg | 07/10/2010 |
| Diethylphthalate | LCS | 4.29 | 97 | (50-115) | | | 4.44 mg/Kg | 07/10/2010 |
| Dimethylphthalate | LCS | 4.04 | 91 | (59-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | LCS | 4.40 | 99 | (56-110) | | | 4.44 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | LCS | 4.91 | 111 | (61-123) | | | 4.44 mg/Kg | 07/10/2010 |
| Fluoranthene | LCS | 4.41 | 99 | (64-115) | | | 4.44 mg/Kg | 07/10/2010 |
| Fluorene | LCS | 3.89 | 88 | (64-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | LCS | 4.26 | 96 | (63-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | LCS | 3.60 | 81 | (57-107) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | LCS | 3.81 | 86 | (35-102) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachloroethane | LCS | 3.13 | 70 | (51-89) | | | 4.44 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.77 | 107 | (60-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Isophorone | LCS | 3.52 | 79 | (57-108) | | | 4.44 mg/Kg | 07/10/2010 |
| Naphthalene | LCS | 3.32 | 75 | (51-105) | | | 4.44 mg/Kg | 07/10/2010 |
| Nitrobenzene | LCS | 3.45 | 78 | (53-99) | | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | LCS | 3.09 | 70 | (45-90) | | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/16/2010 15:22

Client Name Shannon & Wilson, Inc.
 Project Name/# 17368-3 ADOT Inj
 Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|----|------------|--|------------|------------|
| N-Nitroso-di-n-propylamine | LCS | 3.09 | 69 | (59-100) | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | LCS | 3.25 | 73 | (61-114) | | 4.44 mg/Kg | 07/10/2010 |
| Pentachlorophenol | LCS | 6.10 | 98 | (56-117) | | 6.22 mg/Kg | 07/10/2010 |
| Phenanthrene | LCS | 4.17 | 94 | (63-110) | | 4.44 mg/Kg | 07/10/2010 |
| Phenol | LCS | 3.27 | 74 | (56-97) | | 4.44 mg/Kg | 07/10/2010 |
| Pyrene | LCS | 4.25 | 96 | (70-123) | | 4.44 mg/Kg | 07/10/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 96 | (47-125) | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 83 | (45-105) | | | 07/10/2010 |
| 2-Fluorophenol <surr> | LCS | | 72 | (41-84) | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 78 | (37-100) | | | 07/10/2010 |
| Phenol-d6 <surr> | LCS | | 75 | (48-94) | | | 07/10/2010 |
| Terphenyl-d14 <surr> | LCS | | 101 | (50-120) | | | 07/10/2010 |

Batch XMS5509
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 971128 Matrix Spike
 971129 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch MXX23173
 Method Soils/Solids Digest for Metals b
 Date 07/02/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103184001, 1103184002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------------------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | MS | 9.95 | 59.9 | 98 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 61.9 | 98 | | 3 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Cadmium | MS | 0.250 | 4.99 | 93 | (80-120) | | | 5.08 mg/Kg | 07/06/2010 |
| | MSD | | 5.28 | 95 | | 6 | (< 20) | 5.30 mg/Kg | 07/06/2010 |
| Chromium | MS | 37.3 | 59.7 | 110 | (80-120) | | | 20.3 mg/Kg | 07/06/2010 |
| | MSD | | 57.2 | 94 | | 4 | (< 20) | 21.2 mg/Kg | 07/06/2010 |
| Lead | MS | 7.16 | 52.6 | 89 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 54.6 | 90 | | 4 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Batch | MMS6508 | | | | | | | | |
| Method | SW6020 | | | | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | | | | |



SGS Ref.# 971778 Matrix Spike
971779 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
Prep Batch
Method
Date

Original 971777
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:

1103184001, 1103184002, 1103184003

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971778 Matrix Spike
 971779 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch
 Method
 Date

Original 971777
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|----------|------|-----|------------|----|---------|------------|------------|
| 1,1,1,2-Tetrachloroethane | MS | (26.2) U | 1390 | 110 | (77-123) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1450 | 115 | | 4 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | MS | (26.2) U | 1290 | 102 | (77-129) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1300 | 103 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (26.2) U | 1230 | 97 | (80-122) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1370 | 109 | | 11 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | MS | (26.2) U | 1350 | 107 | (85-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1360 | 107 | | 0 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethane | MS | (26.2) U | 1350 | 107 | (81-126) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1340 | 106 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethene | MS | (26.2) U | 1510 | 119 | (75-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 9 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,1-Dichloropropene | MS | (26.2) U | 1390 | 110 | (76-134) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1400 | 111 | | 0 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | MS | (26.2) U | 1440 | 114 | (78-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1510 | 120 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | MS | (26.2) U | 1200 | 95 | (77-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1370 | 108 | | 13 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | MS | (26.2) U | 1360 | 107 | (77-126) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1400 | 110 | | 3 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | MS | (26.2) U | 1300 | 103 | (85-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1280 | 101 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (104) U | 1130 | 90 | (60-135) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1230 | 97 | | 8 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2-Dibromoethane | MS | (26.2) U | 1320 | 105 | (85-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1410 | 111 | | 6 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | MS | (26.2) U | 1310 | 103 | (88-113) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1330 | 106 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2-Dichloroethane | MS | (26.2) U | 1320 | 105 | (83-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1320 | 105 | | 0 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,2-Dichloropropane | MS | (26.2) U | 1420 | 113 | (81-120) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1400 | 111 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | MS | (26.2) U | 1350 | 107 | (87-120) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1370 | 109 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | MS | (26.2) U | 1360 | 108 | (86-117) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1340 | 106 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,3-Dichloropropane | MS | (26.2) U | 1290 | 102 | (84-123) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1330 | 105 | | 3 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | MS | (26.2) U | 1400 | 111 | (86-118) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |



SGS Ref.# 971778 Matrix Spike
 971779 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch
 Method
 Date

Original 971777
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|----------|------|-----|------------|------|---------|------------|------------|
| 2,2-Dichloropropane | MS | (26.2) U | 1320 | 104 | (69-132) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1270 | 101 | | 4 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 2-Butanone (MEK) | MS | (262) U | 3090 | 81 | (57-135) | | | 3790 ug/Kg | 07/04/2010 |
| | MSD | | 3280 | 87 | | 6 | (< 20) | 3790 ug/Kg | 07/04/2010 |
| 2-Chlorotoluene | MS | (26.2) U | 1300 | 103 | (81-122) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1360 | 108 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 2-Hexanone | MS | (262) U | 3450 | 91 | (58-145) | | | 3790 ug/Kg | 07/04/2010 |
| | MSD | | 4130 | 109 | | 18 | (< 20) | 3790 ug/Kg | 07/04/2010 |
| 4-Chlorotoluene | MS | (26.2) U | 1330 | 105 | (84-120) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1310 | 104 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 4-Isopropyltoluene | MS | (26.2) U | 1350 | 106 | (83-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1340 | 106 | | 0 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (262) U | 3760 | 99 | (67-135) | | | 3790 ug/Kg | 07/04/2010 |
| | MSD | | 4250 | 112 | | 12 | (< 20) | 3790 ug/Kg | 07/04/2010 |
| Benzene | MS | (13.1) U | 1370 | 109 | (81-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1360 | 108 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Bromobenzene | MS | (26.2) U | 1410 | 111 | (86-119) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1390 | 110 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Bromochloromethane | MS | (26.2) U | 1280 | 101 | (79-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1300 | 103 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Bromodichloromethane | MS | (26.2) U | 1360 | 108 | (81-127) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1350 | 107 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Bromoform | MS | (26.2) U | 1360 | 108 | (72-135) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1430 | 113 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Bromomethane | MS | (208) U | 1230 | 97 | (49-141) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1160 | 92 | | 6 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Carbon disulfide | MS | (26.2) U | 2090 | 110 | (58-155) | | | 1900 ug/Kg | 07/04/2010 |
| | MSD | | 1910 | 101 | | 9 | (< 20) | 1900 ug/Kg | 07/04/2010 |
| Carbon tetrachloride | MS | (26.2) U | 1360 | 107 | (79-128) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1340 | 106 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Chlorobenzene | MS | (26.2) U | 1340 | 106 | (84-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 3 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Chloroethane | MS | (208) U | 1290 | 102 | (51-141) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1230 | 97 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Chloroform | MS | (26.2) U | 1370 | 109 | (77-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1040 | 82 | | 28 * | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Chloromethane | MS | (26.2) U | 1220 | 96 | (54-129) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1140 | 91 | | 6 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | MS | (26.2) U | 1390 | 110 | (82-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1360 | 108 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |



SGS Ref.# 971778 Matrix Spike
 971779 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch
 Method
 Date

Original 971777
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (26.2) U | 1400 | 111 | (82-122) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Dibromochloromethane | MS | (26.2) U | 1380 | 109 | (84-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1430 | 113 | | 4 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Dibromomethane | MS | (26.2) U | 1310 | 104 | (80-123) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1290 | 102 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Dichlorodifluoromethane | MS | (26.2) U | 1320 | 104 | (43-135) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1290 | 102 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Ethylbenzene | MS | (26.2) U | 1430 | 113 | (87-119) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1420 | 112 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Hexachlorobutadiene | MS | (26.2) U | 1410 | 111 | (74-124) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1320 | 105 | | 6 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | MS | (26.2) U | 1350 | 107 | (89-121) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Methylene chloride | MS | (104) U | 1340 | 106 | (63-137) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1270 | 100 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Methyl-t-butyl ether | MS | (26.2) U | 1980 | 104 | (76-133) | | | 1900 ug/Kg | 07/04/2010 |
| | MSD | | 2030 | 107 | | 3 | (< 20) | 1900 ug/Kg | 07/04/2010 |
| Naphthalene | MS | (50.4) U | 1200 | 95 | (73-131) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1350 | 107 | | 12 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| n-Butylbenzene | MS | (26.2) U | 1370 | 108 | (82-127) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1340 | 106 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| n-Propylbenzene | MS | (26.2) U | 1300 | 103 | (82-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 5 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| o-Xylene | MS | (26.2) U | 1420 | 112 | (89-120) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1400 | 111 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| P & M -Xylene | MS | (50.4) U | 2680 | 106 | (88-121) | | | 2530 ug/Kg | 07/04/2010 |
| | MSD | | 2860 | 113 | | 7 | (< 20) | 2530 ug/Kg | 07/04/2010 |
| sec-Butylbenzene | MS | (26.2) U | 1360 | 107 | (84-122) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Styrene | MS | (26.2) U | 1420 | 112 | (91-120) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1450 | 115 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| tert-Butylbenzene | MS | (26.2) U | 1350 | 107 | (82-122) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1330 | 105 | | 2 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Tetrachloroethene | MS | (26.2) U | 1410 | 112 | (82-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1390 | 110 | | 1 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| Toluene | MS | (26.2) U | 1340 | 106 | (87-119) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1380 | 109 | | 3 | (< 20) | 1260 ug/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | MS | (26.2) U | 1410 | 111 | (79-125) | | | 1260 ug/Kg | 07/04/2010 |
| | MSD | | 1370 | 109 | | 3 | (< 20) | 1260 ug/Kg | 07/04/2010 |



SGS Ref.# 971778 Matrix Spike
 971779 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch
 Method
 Date

Original 971777
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|----------|------|-----|------------|---|---------|------|------------------|
| trans-1,3-Dichloropropene | MS | (26.2) U | 1270 | 101 | (86-122) | | | 1260 | ug/Kg 07/04/2010 |
| | MSD | | 1390 | 110 | | 9 | (< 20) | 1260 | ug/Kg 07/04/2010 |
| Trichloroethene | MS | (26.2) U | 1370 | 108 | (77-124) | | | 1260 | ug/Kg 07/04/2010 |
| | MSD | | 1350 | 107 | | 1 | (< 20) | 1260 | ug/Kg 07/04/2010 |
| Trichlorofluoromethane | MS | (26.2) U | 1370 | 109 | (64-139) | | | 1260 | ug/Kg 07/04/2010 |
| | MSD | | 1340 | 106 | | 2 | (< 20) | 1260 | ug/Kg 07/04/2010 |
| Vinyl chloride | MS | (26.2) U | 1340 | 106 | (67-125) | | | 1260 | ug/Kg 07/04/2010 |
| | MSD | | 1290 | 102 | | 4 | (< 20) | 1260 | ug/Kg 07/04/2010 |
| Xylenes (total) | MS | (79.0) U | 4090 | 108 | (89-120) | | | 3790 | ug/Kg 07/04/2010 |
| | MSD | | 4260 | 112 | | 4 | (< 20) | 3790 | ug/Kg 07/04/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|------|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 1320 | 104 | (69-132) | | | | 07/04/2010 |
| | MSD | | 1330 | 105 | | 1 | | | 07/04/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 2960 | 105 | (65-144) | | | | 07/04/2010 |
| | MSD | | 2980 | 105 | | 1 | | | 07/04/2010 |
| Toluene-d8 <surr> | MS | | 1350 | 107 | (84-124) | | | | 07/04/2010 |
| | MSD | | 1380 | 109 | | 2 | | | 07/04/2010 |

Batch VMS11348
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972388 Matrix Spike
972389 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
Prep Batch XXX23007
Method Sonication Extraction Soil SW8
Date 07/09/2010

Original 1103191001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:

1103184001, 1103184002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (5.26) U | 2.87 | 61 | (54-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | MS | (5.26) U | 2.70 | 57 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 17 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | MS | (5.26) U | 2.87 | 61 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.12 | 66 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | MS | (5.26) U | 2.69 | 57 | (51-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.93 | 62 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | MS | (5.26) U | 2.82 | 60* | (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.13 | 66* | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | MS | (5.26) U | 2.95 | 63* | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | MS | (5.26) U | 2.55 | 54* | (64-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.63 | 56* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | MS | (5.26) U | 3.34 | 71 | (63-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.35 | 71 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | MS | (63.2) U | 0.00 | 0* | (43-130) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | MS | (5.26) U | 3.80 | 81 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.88 | 82 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | MS | (5.26) U | 3.84 | 82 | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.01 | 64* | | 24 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | MS | (5.26) U | 3.02 | 64 | (52-103) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | MS | (5.26) U | 2.55 | 54* | (56-94) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.75 | 58 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (42.1) U | 13.3 | 158* | (51-131) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 13.3 | 156* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | MS | 8.67 | 11.1 | 52* | (61-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 11.4 | 59* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | MS | (5.26) U | 2.72 | 58* | (61-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.98 | 63 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | MS | (5.26) U | 3.28 | 70* | (70-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.58 | 76 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | MS | (5.26) U | 3.34 | 71 | (65-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cres) | MS | (21.1) U | 0.00 | 0* | (65-105) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 7.11 | 107* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | MS | (5.26) U | 2.86 | 61 | (49-128) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | 78 | | 26 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 3-Nitroaniline | MS | (10.5) U | 0.00 | | 0* (66-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Bromophenyl-phenylether | MS | (5.26) U | 2.51 | | 53 (53-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.95 | | 62 | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | MS | (5.26) U | 2.95 | | 63* (69-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.17 | | 67* | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | MS | (5.26) U | 2.09 | | 45* (58-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.45 | | 52* | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | MS | (5.26) U | 3.01 | | 64 (53-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.14 | | 66 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | MS | (63.2) U | 0.00 | | 0* (63-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | MS | (21.1) U | 0.00 | | 0* (44-137) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Acenaphthene | MS | (5.26) U | 3.60 | | 77 (57-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.95 | | 83 | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Acenaphthylene | MS | (5.26) U | 3.50 | | 75 (56-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.66 | | 77 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Aniline | MS | (42.1) U | 0.00 | | 0* (40-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Anthracene | MS | (5.26) U | 3.40 | | 72 (65-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.38 | | 71 | 1 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Azobenzene | MS | (5.26) U | 3.13 | | 67 (54-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | MS | (5.26) U | 3.34 | | 71* (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | | 78 | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | MS | (5.26) U | 3.43 | | 73 (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | | 75 | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | MS | (5.26) U | 0.00 | | 0* (70-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | MS | (5.26) U | 3.30 | | 70 (52-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | MS | (5.26) U | 2.68 | | 57* (66-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.26 | | 69 | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzoic acid | MS | (31.6) U | 0.00 | | 0* (25-76) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 16.3 | | 246* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Benzyl alcohol | MS | (5.26) U | 4.53 | | 96 (61-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.04 | | 106 | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2chloro1methylethyl)Ether | MS | (5.26) U | 2.88 | | 61 (50-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.09 | | 65 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2-Chloroethoxy)methane | MS | (5.26) U | 2.74 | 58 | (57-104) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethyl)ether | MS | (5.26) U | 2.79 | 59 | (49-91) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | MS | (5.26) U | 4.44 | 95 | (62-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.05 | 106 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | MS | (5.26) U | 3.68 | 78 | (69-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.93 | 83 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Chrysene | MS | (5.26) U | 3.40 | 72 | (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.61 | 76 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | MS | (5.26) U | 3.23 | 69 | (61-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.29 | 69 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzofuran | MS | (5.26) U | 3.58 | 76 | (60-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Diethylphthalate | MS | (5.26) U | 3.12 | 66 | (50-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.30 | 70 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dimethylphthalate | MS | (5.26) U | 2.95 | 63 | (59-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | 75 | | 18 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | MS | (5.26) U | 3.47 | 74 | (56-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.63 | 77 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | MS | (5.26) U | 3.48 | 74 | (61-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.71 | 78 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluoranthene | MS | (5.26) U | 3.61 | 77 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | 75 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluorene | MS | (5.26) U | 3.51 | 75 | (64-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | MS | (5.26) U | 3.45 | 73 | (63-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | MS | (5.26) U | 3.71 | 79 | (57-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.49 | 74 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | MS | (14.7) U | 0.00 | 0* | (35-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.34 | 92 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachloroethane | MS | (5.26) U | 7.09 | 151* | (51-89) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 8.94 | 189* | | 23 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | MS | (5.26) U | 3.21 | 68 | (60-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.45 | 73 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Isophorone | MS | (5.26) U | 4.23 | 90 | (57-108) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.41 | 93 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Naphthalene | MS | (5.26) U | 5.09 | 108* | (51-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.29 | 112* | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/16/2010 15:22
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Nitrobenzene | MS | (5.26) U | 2.83 | 60 | (53-99) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | MS | (5.26) U | 1.92 | 41* | (45-90) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.08 | 44* | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitroso-di-n-propylamine | MS | (5.26) U | 2.41 | 51* | (59-100) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | MS | (5.26) U | 2.96 | 63 | (61-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.89 | 61 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pentachlorophenol | MS | (42.1) U | 0.00 | 0* | (56-117) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Phenanthrene | MS | (5.26) U | 3.70 | 79 | (63-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.06 | 86 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Phenol | MS | (5.26) U | 2.11 | 45* | (56-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 15 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pyrene | MS | (5.26) U | 3.34 | 71 | (70-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.50 | 74 | | 5 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Surrogates | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | MS | | 6.52 | 69 | (47-125) | | | | 07/10/2010 |
| | MSD | | 6.37 | 67 | | 2 | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | MS | | 3.38 | 72 | (45-105) | | | | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 11 | | | 07/10/2010 |
| 2-Fluorophenol <surr> | MS | | 4.02 | 43 | (41-84) | | | | 07/10/2010 |
| | MSD | | 4.97 | 53 | | 21 | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | MS | | 2.66 | 57 | (37-100) | | | | 07/10/2010 |
| | MSD | | 2.85 | 60 | | 7 | | | 07/10/2010 |
| Phenol-d6 <surr> | MS | | 5.07 | 54 | (48-94) | | | | 07/10/2010 |
| | MSD | | 5.49 | 58 | | 8 | | | 07/10/2010 |
| Terphenyl-d14 <surr> | MS | | 3.22 | 69 | (50-120) | | | | 07/10/2010 |
| | MSD | | 3.56 | 75 | | 10 | | | 07/10/2010 |

Batch XMS5509
 Method SW8270D
 Instrument HP 6890/5973 SSA

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

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1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

CHAIN-OF-CUSTODY RECORD

Laboratory SGS Page 1 of 1
Attn: Jennifer

Analysis Parameters/Sample Container Description
(include preservative if used)

| | | | | | | | | |
|-----------------|------|---|---|---|---|---|---|--|
| VOC case | GRAB | | | | | | | |
| SYNOC 270 | GRAB | X | X | X | X | X | X | |
| PSI (C) (L) (B) | GRAB | X | X | X | X | X | X | |
| EMAG 606/700 | GRAB | X | X | X | X | X | X | |

| Sample Identity | Lab No. | Time | Date Sampled | Comp. | GRAB | VOC case | SYNOC 270 | PSI (C) (L) (B) | EMAG 606/700 | Total Number of Containers | Remarks/Matrix |
|--|---------|------|--------------|-------|------|----------|-----------|-----------------|--------------|----------------------------|-----------------|
| 17368-3-BIS2 | ① A, B | 1455 | 6/30/10 | X | X | X | X | X | X | 2 | Soil |
| -B222 | ② A, B | 1620 | ↓ | X | X | X | X | X | X | 2 | ↓ |
| -5TB | ③ A | 1400 | ↓ | X | X | X | X | X | X | 1 | Soil trip blend |
| <p>1103184</p>  | | | | | | | | | | | |

Project Information

Project Number: 17368-3

Project Name: ADOT Mj

Contact: MT

Ongoing Project? Yes No

Sampler: JG

Sample Receipt

Total Number of Containers: _____

COC Seals/Intact? Y/N/NA: _____

Received Good Cond./Cold: _____

Delivery Method: _____
(attach shipping bill, if any)

Instructions

Requested Turnaround Time: 5 business

Special Instructions: CTI delivered

Project samples in blue cooler. Discard jars in large red cooler

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

| Relinquished By: 1. | Relinquished By: 2. | Relinquished By: 3. |
|--|--|--|
| Signature: <u>Calder</u> Printed Name: <u>Calder Calder</u> Company: <u>Shannon & Wilson</u> | Signature: _____ Printed Name: _____ Company: _____ | Signature: _____ Printed Name: _____ Company: _____ |
| Time: <u>943</u> Date: <u>7/1/10</u> | Time: _____ Date: _____ | Time: _____ Date: _____ |
| Received By: 1. Signature: _____ Printed Name: _____ Company: _____ | Received By: 2. Signature: _____ Printed Name: _____ Company: _____ | Received By: 3. Signature: <u>[Signature]</u> Printed Name: <u>Shannon & Wilson</u> Company: <u>SGS</u> |
| Time: _____ Date: _____ | Time: _____ Date: _____ | Time: <u>0943</u> Date: <u>7/1/10</u> |



SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|---|---|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | Yes No <u>N/A</u> | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: <u>3.81</u> @ <u>3.8</u> w/ Therm.ID: <u>13D</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & " COOLER TEMP " will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | <u>Yes</u> No N/A <u>Yes</u> No N/A Yes No <u>N/A</u> | |
| Delivery method (specify all that apply): Client USPS Alert Courier Road Runner AK Air Lynden Carlile ERA FedEx UPS NAC PenAir Other: _____ | Note airbill/tracking # See Attached <u>N/A</u> | |
| * For samples received with payment, note amount (\$) and cash / check / CC (circle one). <u>N/A</u> * For samples received in FBKS, ANCH staff will verify all criteria are reviewed. SRF Initiated by: <u>N/A</u> | | |
| Do samples match COC (i.e., sample IDs, dates/times collected)? Are analyses requested unambiguous? | <u>Yes</u> No N/A <u>Yes</u> No N/A | |
| Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): <u>Bubble wrap</u> Separate plastic bags Vermiculite Other: _____ | <u>Yes</u> No N/A | |
| Were all VOA vials free of headspace (i.e., bubbles <6 mm)? Were all soil VOAs field extracted with MeOH+BFB? | Yes No <u>N/A</u> <u>Yes</u> No N/A | |
| Were proper containers (type/mass/volume/preservative) used? Were the bottles provided by SGS? (Note apparent exceptions.) Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? | <u>Yes</u> No N/A <u>Yes</u> No N/A <u>Yes</u> No N/A | |
| For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F066) for documentation.</i> | Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| For RUSH or SHORT HOLD TIME samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified? | Yes No <u>N/A</u> | |
| For client requested, site-specific QC (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly? | Yes No <u>N/A</u> | |
| For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? | Yes No <u>N/A</u> | |
| Was PEER REVIEW of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, each container had a unique container ID)? | <u>Yes</u> No N/A | SRF Completed by: <u>SH</u> Bottle Sheet by: <u>SH</u> |
| Was the WO# recorded in Front Counter/Sample Receiving log? | <u>Yes</u> No N/A | Peer Reviewed by: <u>ASH</u> |
| For any questions answered "NO," was the PM notified? | Yes No <u>N/A</u> | PM = _____ N/A |
| Additional notes (if applicable): | | |

| WO# (7 digits) | Sample # | | Container ID | | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|----------|----------|--------------|--------------|--------|------------|------------------------|----------------------|--------------|--|
| | Sample # | Sample # | Container ID | Container ID | | | | | | |
| SAMPLE ID | | | | | TYPE | CONTAINERS | ANALYSIS | Type comments below: | | |
| 1103184 | 001 | 002 | A | A | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103184 | 001 | 002 | B | B | 2 Soil | | MeOH+BFB * | S_GRO/VOC | | |
| 1103184 | 003 | 003 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GRO/VOC | | |
| | | | | | | | | | | |

1103184


LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 19, 2010

Laboratory Report Date: July 19, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103184

ADEC File Number: 2314.26.002 – 2314.26.003

(NOTE: *NA* = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA Yes / No

Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? NA / **Yes** / No

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / No

Comments: *Sample condition was verified by laboratory to be acceptable.*

- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? NA / **Yes** / No

Comments: *The laboratory noted no discrepancies.*

- e. Data quality or usability affected? Explain. **NA**

Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / No

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**

Comments: *For LCS and MS/MSD discrepancies see section 6.b. CCV and ICV recoveries of several analytes were outside of the QC criteria.*

- c. Were corrective actions documented? **None Noted** / Yes

Comments:

- d. What is the effect on data quality/usability, according to the case narrative? NA

Comments: *Recovery of the analytes with CCV and ICV recovery discrepancies were not detected above the laboratory reporting limit in the associated samples.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No

Comments:

- b. All applicable holding times met? **Yes** / No

Comments:

- c. All soils reported on a dry-weight basis? NA / **Yes** / No

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / **No**

Comments: *The PQLs for multiple VOC and SVOC compounds are greater than the respective cleanup levels.*

- e. Data quality or usability affected? Explain. *NA*

Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) **NA** / Yes / No

Comments: *LCS only. MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? *N/A* / **Yes** / No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) **Yes** / **No**

Comments: *MS/MSD recoveries of multiple VOC and SVOC compounds are outside QC criteria. Sample results are considered unaffected because the subject SVOCs were not detected in the project samples and the LCS met the criteria.*

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) Yes **No**

Comments: *The MS/MSD RPD chloroform was outside acceptance criteria. This compound was not detected above the PQL in the associated project samples.*

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**

Comments: *The data is considered acceptable because the subject analytes were either not detected or their concentrations are less than the cleanup criteria.*

- vi. Do the affected samples(s) have data flags? **NA / Yes / No**

Comments:

If so, are the data flags clearly defined? **NA / Yes / No**

Comments:

- vii. Data quality or usability affected? Explain. **NA**

Comments: *Chloroform was not detected above the laboratory reporting limit in the project samples.*

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **NA / Yes / No**

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **NA / Yes / No**

Comments: *CCV and/or ICV recoveries for chloromethane, vinyl chloride, and dichlorodifluoromethane are biased high. The project sample results are considered usable for the intended use of the data because these compounds were either not detected or their concentrations are less than the cleanup criteria.*

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA / Yes / No**

Comments:

If so, are the data flags clearly defined? **NA / Yes / No**

Comments:

- iv. Data quality or usability affected? Explain. **NA**

Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

- i. One trip blank reported per matrix, analysis and cooler? *NA* / **Yes** / No
Comments:

- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? *NA* / **Yes** / No (if no explain):

- iii. All results less than PQL? *NA* / **Yes** / No
Comments:

- iv. If above PQL, what samples are affected? **NA**
Comments:

- v. Data quality or usability affected? Explain. **NA**
Comments:

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No
Comments: *A field duplicate for this project is submitted under a separate work order.*

- ii. Were the field duplicates submitted blind to the lab? **NA** / Yes / No
Comments:

- iii. Precision – All relative percent differences (RPDs) less than specified DQOs? (Recommended: 30% for water, 50% for soil) **NA** / Yes / No
Comments:

- iv. Data quality or usability affected? Explain. **NA**
Comments:

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

NA / Yes / No

Comments: An EB was not included in the scope for this project.

- i. All results less than PQL? **NA** / Yes / No
Comments:

- ii. If results are above PQL, what samples are affected? **NA**
Comments:

Work Order Number: 1103184

- iii. Data quality or usability affected? Explain. **NA**
Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

- a. Are they defined and appropriate? **NA / Yes / No**
Comments: Data Flags/Qualifiers are defined on page following Case Narrative.



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 32-1-17368 DOT/PF Stations
Client: Shannon & Wilson, Inc.
SGS Work Order: 1103191

Released by:

Contents (Bookmarked in PDF):

Cover Page
Case Narrative
Sample Results Forms
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)

Case Narrative

Customer: SHANNOT

Shannon & Wilson, Inc.

Project: 1103191

32-1-17368 DOT/PF Stations

Refer to the sample receipt form for information on sample condition.

1103191001 PS

17368-2B1S2

8270D - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1103191002 PS

17368-2B2S3

8270D - Surrogate recovery is outside of QC criteria (biased low). The sample was re-extracted and the results were confirmed.

1103191005 PS

17368-7B1S2

8270D - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1103191006 TB

17368-2TB

8260B - Several analytes detected in the TB. The analytes were non-detect or over 10 times the amount found in the TB in the associated samples.

971352 MS

1103191001MS

8270D - Surrogate recovery is outside of QC criteria (biased low).

8270D - MS recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.

972388 MS

1103191001MS

8270D - MS recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.

971353 MSD

1103191001MSD

8270D - MSD recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.

8270D - MS/MSD RPD for multiple analytes does not meet QC criteria. These analytes were not detected above the LOQ in the original sample.

971434 MSD

971432MSD

8260B - MSD recovery for 1,1-dichloroethene and toluene does not meet QC criteria (biased high). Refer to LCS for accuracy.

972389 MSD

1103191001MSD

8270D - MSD recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy.

8270D - MS/MSD RPD for multiple analytes does not meet QC criteria. These analytes were not detected above the LOQ in the parent sample.

971350 LCS

XXX/22964]

8270D - LCS recovery for multiple analytes does not meet QC criteria (biased low).

971496 LCS

VXX/20876]

8260B - LCS recovery for bromochloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

971440 CCV

VMS/11345]

8260B - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

8260B - CCV recovery for dichlorodifluoromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

971520 CCV

XMS/5500

8270D - CCV recovery for 4-nitrophenol does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

Haydar Turker
Shannon & Wilson, Inc.
5430 Fairbanks St., Suite 3
Anchorage, AK 99518

Work Order: 1103191
32-1-17368 DOT/PF Stations

Client: Shannon & Wilson, Inc.

Report Date: July 14, 2010

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (http://www.sgs.com/terms_and_conditions.htm), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

- * The analyte has exceeded allowable regulatory or control limits.
- ! Surrogate out of control limits.
- B Indicates the analyte is found in a blank associated with the sample.
- CCV Continuing Calibration Verification
- CL Control Limit
- D The analyte concentration is the result of a dilution.
- DF Dilution Factor
- DL Detection Limit (i.e., maximum method detection limit)
- E The analyte result is above the calibrated range.
- F Indicates value that is greater than or equal to the DL
- GT Greater Than
- ICV Initial Calibration Verification
- J The quantitation is an estimation.
- JL The analyte was positively identified, but the quantitation is a low estimation.
- LCS(D) Laboratory Control Spike (Duplicate)
- LOD Limit of Detection (i.e., 2xDL)
- LOQ Limit of Quantitation (i.e., reporting or practical quantitation limit)
- LT Less Than
- M A matrix effect was present.
- MB Method Blank
- MS(D) Matrix Spike (Duplicate)
- ND Indicates the analyte is not detected.
- Q QC parameter out of acceptance range.
- R Rejected
- RPD Relative Percent Difference
- U Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



Detectable Results Summary

Print Date: 7/14/2010 11:33 am

Client Sample ID: **17368-2B1S2**

SGS Ref. #: 1103191001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 9.95 | mg/Kg |
| Cadmium | 0.250 | mg/Kg |
| Chromium | 37.3 | mg/Kg |
| Lead | 7.16 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|---------------------------|------|-------|
| Benzene | 17.8 | ug/Kg |
| Toluene | 550 | ug/Kg |
| Ethylbenzene | 150 | ug/Kg |
| n-Butylbenzene | 523 | ug/Kg |
| 1,3,5-Trimethylbenzene | 1510 | ug/Kg |
| 4-Isopropyltoluene | 455 | ug/Kg |
| n-Propylbenzene | 412 | ug/Kg |
| sec-Butylbenzene | 422 | ug/Kg |
| P & M -Xylene | 825 | ug/Kg |
| Naphthalene | 830 | ug/Kg |
| o-Xylene | 611 | ug/Kg |
| Xylenes (total) | 1440 | ug/Kg |
| 1,2,4-Trimethylbenzene | 3170 | ug/Kg |
| tert-Butylbenzene | 35.4 | ug/Kg |
| Isopropylbenzene (Cumene) | 174 | ug/Kg |

Semivolatile Organic GC/MS

| | | |
|---------------------|------|-------|
| 2-Methylnaphthalene | 8.67 | mg/Kg |
|---------------------|------|-------|

Client Sample ID: **17368-2B2S3**

SGS Ref. #: 1103191002

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 11.4 | mg/Kg |
| Chromium | 40.7 | mg/Kg |
| Lead | 5.17 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|---------------------|------|-------|
| 1,4-Dichlorobenzene | 28.1 | ug/Kg |
| 4-Isopropyltoluene | 140 | ug/Kg |



Detectable Results Summary

Print Date: 7/14/2010 11:33 am

Client Sample ID: **17368-6B1S2**

SGS Ref. #: 1103191003

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 7.82 | mg/Kg |
| Cadmium | 0.268 | mg/Kg |
| Chromium | 37.8 | mg/Kg |
| Lead | 5.30 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|------------|------|-------|
| Chloroform | 50.4 | ug/Kg |
|------------|------|-------|

Client Sample ID: **17368-6B2S4**

SGS Ref. #: 1103191004

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 12.2 | mg/Kg |
| Cadmium | 0.326 | mg/Kg |
| Chromium | 37.7 | mg/Kg |
| Lead | 6.28 | mg/Kg |



Detectable Results Summary

Print Date: 7/14/2010 11:33 am

Client Sample ID: **17368-7B1S2**

SGS Ref. #: 1103191005

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 6.65 | mg/Kg |
| Chromium | 13.4 | mg/Kg |
| Lead | 16.8 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|---------------------------|-------|-------|
| Benzene | 52.3 | ug/Kg |
| Toluene | 1930 | ug/Kg |
| Ethylbenzene | 1710 | ug/Kg |
| n-Butylbenzene | 1250 | ug/Kg |
| 1,4-Dichlorobenzene | 1680 | ug/Kg |
| 1,3,5-Trimethylbenzene | 10000 | ug/Kg |
| cis-1,2-Dichloroethene | 6120 | ug/Kg |
| 4-Isopropyltoluene | 940 | ug/Kg |
| n-Propylbenzene | 2320 | ug/Kg |
| Tetrachloroethene | 2460 | ug/Kg |
| sec-Butylbenzene | 1070 | ug/Kg |
| P & M -Xylene | 10700 | ug/Kg |
| Naphthalene | 13700 | ug/Kg |
| o-Xylene | 9920 | ug/Kg |
| Xylenes (total) | 20600 | ug/Kg |
| 1,2,4-Trimethylbenzene | 31400 | ug/Kg |
| tert-Butylbenzene | 97.1 | ug/Kg |
| Trichloroethene | 295 | ug/Kg |
| trans-1,2-Dichloroethene | 51.9 | ug/Kg |
| 1,2-Dichlorobenzene | 12000 | ug/Kg |
| Isopropylbenzene (Cumene) | 1220 | ug/Kg |
| 1,3-Dichlorobenzene | 513 | ug/Kg |

Semivolatile Organic GC/MS

| | | |
|---------------------|------|-------|
| Naphthalene | 9.15 | mg/Kg |
| 2-Methylnaphthalene | 39.9 | mg/Kg |

Client Sample ID: **17368-2TB**

SGS Ref. #: 1103191006

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------------|---------------|--------------|
| 1,2,4-Trimethylbenzene | 55.2 | ug/Kg |



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

8270D - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | 9.95 | 0.976 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.250 | 0.195 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 37.3 | 0.390 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 7.16 | 0.195 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| 1,1,1,2-Tetrachloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,1-Trichloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2-Trichloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloropropene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichloropropane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trichlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trimethylbenzene | 3170 | 495 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 99.1 U | 99.1 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dibromoethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloroethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloropropane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3,5-Trimethylbenzene | 1510 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichloropropane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,4-Dichlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2,2-Dichloropropane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 248 U | 248 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Chlorotoluene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Hexanone | 248 U | 248 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Chlorotoluene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Isopropyltoluene | 455 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 248 U | 248 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Benzene | 17.8 | 12.4 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromochloromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromodichloromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromoform | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromomethane | 198 U | 198 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon disulfide | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon tetrachloride | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chlorobenzene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroethane | 198 U | 198 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroform | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,2-Dichloroethene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,3-Dichloropropene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromochloromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromomethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dichlorodifluoromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Ethylbenzene | 150 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Hexachlorobutadiene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Isopropylbenzene (Cumene) | 174 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methylene chloride | 99.1 U | 99.1 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methyl-t-butyl ether | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Naphthalene | 830 | 49.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| n-Butylbenzene | 523 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 412 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| o-Xylene | 611 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| P & M -Xylene | 825 | 49.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| sec-Butylbenzene | 422 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Styrene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| tert-Butylbenzene | 35.4 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Tetrachloroethene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Toluene | 550 | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,2-Dichloroethene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,3-Dichloropropene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichloroethene | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichlorofluoromethane | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Vinyl chloride | 24.8 U | 24.8 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Xylenes (total) | 1440 | 74.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 94.3 | | % | SW8260B | B | 69-132 | | 07/05/10 | DSH |
| 4-Bromofluorobenzene <surr> | 116 | | % | SW8260B | B | 65-144 | | 07/05/10 | DSH |
| Toluene-d8 <surr> | 104 | | % | SW8260B | B | 84-124 | | 07/05/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 1,2-Dichlorobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 1,3-Dichlorobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 1,4-Dichlorobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,4,5-Trichlorophenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,4,6-Trichlorophenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,4-Dichlorophenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,4-Dimethylphenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,4-Dinitrophenol | 63.2 U | 63.2 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2,6-Dinitrotoluene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Chloronaphthalene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Chlorophenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 42.1 U | 42.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Methylnaphthalene | 8.67 | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Methylphenol (o-Cresol) | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Nitroaniline | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 2-Nitrophenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 21.1 U | 21.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 3,3-Dichlorobenzidine | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 3-Nitroaniline | 10.5 U | 10.5 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Bromophenyl-phenylether | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Chloro-3-methylphenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Chloroaniline | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Chlorophenyl-phenylether | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Nitroaniline | 63.2 U | 63.2 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| 4-Nitrophenol | 21.1 U | 21.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Acenaphthene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Acenaphthylene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Aniline | 42.1 U | 42.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Anthracene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Azobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzo(a)Anthracene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzo[a]pyrene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzo[b]Fluoranthene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzo[g,h,i]perylene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzo[k]fluoranthene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzoic acid | 31.6 U | 31.6 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Benzyl alcohol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|------------------------------------|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatiles Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Bis(2-Chloroethoxy)methane | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Bis(2-Chloroethyl)ether | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Butylbenzylphthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Chrysene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Dibenzo[a,h]anthracene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Dibenzofuran | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Diethylphthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Dimethylphthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Di-n-butylphthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| di-n-Octylphthalate | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Fluoranthene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Fluorene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Hexachlorobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Hexachlorobutadiene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Hexachlorocyclopentadiene | 14.7 U | 14.7 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Hexachloroethane | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Isophorone | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Naphthalene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Nitrobenzene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| N-Nitrosodimethylamine | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| N-Nitroso-di-n-propylamine | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| N-Nitrosodiphenylamine | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Pentachlorophenol | 42.1 U | 42.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Phenanthrene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Phenol | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |
| Pyrene | 5.26 U | 5.26 | mg/Kg | SW8270D | A | | 07/09/10 | 07/10/10 | JDH |

Surrogates



SGS Ref.# 1103191001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 11:17
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 66 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/10/10 | JDH |
| 2-Fluorobiphenyl <surr> | 76.1 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/10/10 | JDH |
| 2-Fluorophenol <surr> | 47.2 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/10/10 | JDH |
| Nitrobenzene-d5 <surr> | 49.6 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/10/10 | JDH |
| Phenol-d6 <surr> | 51.2 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/10/10 | JDH |
| Terphenyl-d14 <surr> | 79.5 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/10/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 93.7 | | % | SM20 2540G | | | | 07/01/10 | AHJ |



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 12:52
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

8270D - Surrogate recovery is outside of QC criteria (biased low). The sample was re-extracted and the results were confirmed.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 11.4 | 1.13 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.227 U | 0.227 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 40.7 | 0.454 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 5.17 | 0.227 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,1-Trichloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,2-Trichloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloroethene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloropropene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,3-Trichlorobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,3-Trichloropropane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,4-Trichlorobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,4-Trimethylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/06/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 105 U | 105 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dibromoethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dichlorobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dichloroethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dichloropropane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,3,5-Trimethylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/06/10 | DSH |
| 1,3-Dichlorobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,3-Dichloropropane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,4-Dichlorobenzene | 28.1 | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 2,2-Dichloropropane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 12:52
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 263 U | 263 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Chlorotoluene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Hexanone | 263 U | 263 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Chlorotoluene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Isopropyltoluene | 140 | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 263 U | 263 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Benzene | 13.1 U | 13.1 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromochloromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromodichloromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromoform | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromomethane | 210 U | 210 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon disulfide | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon tetrachloride | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chlorobenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroethane | 210 U | 210 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroform | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,2-Dichloroethene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,3-Dichloropropene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromochloromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromomethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dichlorodifluoromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Ethylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Hexachlorobutadiene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Isopropylbenzene (Cumene) | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methylene chloride | 105 U | 105 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methyl-t-butyl ether | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Naphthalene | 52.6 U | 52.6 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| n-Butylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 12:52
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|-------------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| o-Xylene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| P & M -Xylene | 52.6 U | 52.6 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| sec-Butylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Styrene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| tert-Butylbenzene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Tetrachloroethene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Toluene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,2-Dichloroethene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,3-Dichloropropene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichloroethene | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichlorofluoromethane | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Vinyl chloride | 26.3 U | 26.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Xylenes (total) | 78.9 U | 78.9 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 97.4 | | % | SW8260B | B | 69-132 | | 07/05/10 | DSH |
| 4-Bromofluorobenzene <surr> | 107 | | % | SW8260B | B | 65-144 | | 07/05/10 | DSH |
| Toluene-d8 <surr> | 105 | | % | SW8260B | B | 84-124 | | 07/05/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 1,2-Dichlorobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 1,3-Dichlorobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 1,4-Dichlorobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 2,4,5-Trichlorophenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 2,4,6-Trichlorophenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 2,4-Dichlorophenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 2,4-Dimethylphenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |
| 2,4-Dinitrophenol | 3.37 U | 3.37 | mg/Kg | SW8270D | A | | | 07/09/10 07/12/10 | JDH |



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 12:52
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2,6-Dinitrotoluene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Chloronaphthalene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Chlorophenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.25 U | 2.25 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Methylnaphthalene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Nitroaniline | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 2-Nitrophenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.12 U | 1.12 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 3,3-Dichlorobenzidine | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 3-Nitroaniline | 0.562 U | 0.562 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Bromophenyl-phenylether | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Chloro-3-methylphenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Chloroaniline | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Nitroaniline | 3.37 U | 3.37 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| 4-Nitrophenol | 1.12 U | 1.12 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Acenaphthene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Acenaphthylene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Aniline | 2.25 U | 2.25 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Anthracene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Azobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzo(a)Anthracene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzo[a]pyrene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzo[b]Fluoranthene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzo[g,h,i]perylene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzo[k]fluoranthene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzoic acid | 1.69 U | 1.69 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Benzyl alcohol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
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Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

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Collected Date/Time 06/29/2010 12:52
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Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Butylbenzylphthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Chrysene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Dibenzo[a,h]anthracene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Dibenzofuran | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Diethylphthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Dimethylphthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Di-n-butylphthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| di-n-Octylphthalate | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Fluoranthene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Fluorene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Hexachlorobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Hexachlorobutadiene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Hexachlorocyclopentadiene | 0.787 U | 0.787 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Hexachloroethane | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Isophorone | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Naphthalene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Nitrobenzene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| N-Nitrosodimethylamine | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| N-Nitrosodiphenylamine | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Pentachlorophenol | 2.25 U | 2.25 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Phenanthrene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Phenol | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |
| Pyrene | 0.281 U | 0.281 | mg/Kg | SW8270D | A | | 07/09/10 | 07/12/10 | JDH |

Surrogates



SGS Ref.# 1103191002
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2B2S3
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 12:52
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Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 58.5 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/12/10 | JDH |
| 2-Fluorobiphenyl <surr> | 43.6 | ! | % | SW8270D | A | 45-105 | 07/09/10 | 07/12/10 | JDH |
| 2-Fluorophenol <surr> | 43.9 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/12/10 | JDH |
| Nitrobenzene-d5 <surr> | 37.6 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/12/10 | JDH |
| Phenol-d6 <surr> | 42.1 | ! | % | SW8270D | A | 48-94 | 07/09/10 | 07/12/10 | JDH |
| Terphenyl-d14 <surr> | 85.7 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/12/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 87.9 | | % | SM20 2540G | | | | 07/01/10 | AHJ |



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 7.82 | 0.970 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.268 | 0.194 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 37.8 | 0.388 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 5.30 | 0.194 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,1-Trichloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2-Trichloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloropropene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichloropropane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trichlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trimethylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 106 U | 106 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dibromoethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloroethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloropropane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3,5-Trimethylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichloropropane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,4-Dichlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2,2-Dichloropropane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 265 U | 265 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Chlorotoluene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Hexanone | 265 U | 265 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Chlorotoluene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Isopropyltoluene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 265 U | 265 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Benzene | 13.3 U | 13.3 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromochloromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromodichloromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromoform | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromomethane | 212 U | 212 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon disulfide | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon tetrachloride | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chlorobenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroethane | 212 U | 212 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroform | 50.4 | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,2-Dichloroethene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,3-Dichloropropene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromochloromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromomethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dichlorodifluoromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Ethylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Hexachlorobutadiene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Isopropylbenzene (Cumene) | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methylene chloride | 106 U | 106 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methyl-t-butyl ether | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Naphthalene | 53.1 U | 53.1 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| n-Butylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| o-Xylene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| P & M -Xylene | 53.1 U | 53.1 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| sec-Butylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Styrene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| tert-Butylbenzene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Tetrachloroethene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Toluene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,2-Dichloroethene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,3-Dichloropropene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichloroethene | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichlorofluoromethane | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Vinyl chloride | 26.5 U | 26.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Xylenes (total) | 79.6 U | 79.6 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 102 | | % | SW8260B | B | 69-132 | | 07/05/10 | DSH |
| 4-Bromofluorobenzene <surr> | 103 | | % | SW8260B | B | 65-144 | | 07/05/10 | DSH |
| Toluene-d8 <surr> | 111 | | % | SW8260B | B | 84-124 | | 07/05/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,2-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,3-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 1,4-Dichlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,5-Trichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4,6-Trichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dichlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dimethylphenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,4-Dinitrophenol | 3.08 U | 3.08 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,6-Dinitrotoluene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chloronaphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chlorophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylnaphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitroaniline | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitrophenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.03 U | 1.03 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3,3-Dichlorobenzidine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3-Nitroaniline | 0.514 U | 0.514 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Bromophenyl-phenylether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloro-3-methylphenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloroaniline | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitroaniline | 3.08 U | 3.08 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitrophenol | 1.03 U | 1.03 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthylene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Aniline | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Azobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo(a)Anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[a]pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[b]Fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[g,h,i]perylene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[k]fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzoic acid | 1.54 U | 1.54 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzyl alcohol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Butylbenzylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Chrysene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzo[a,h]anthracene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzofuran | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Diethylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dimethylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Di-n-butylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| di-n-Octylphthalate | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluoranthene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluorene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobutadiene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorocyclopentadiene | 0.719 U | 0.719 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachloroethane | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Isophorone | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Naphthalene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodimethylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodiphenylamine | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pentachlorophenol | 2.05 U | 2.05 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenanthrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenol | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pyrene | 0.257 U | 0.257 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |

Surrogates



SGS Ref.# 1103191003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 17:05
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 91 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorobiphenyl <surr> | 83 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorophenol <surr> | 75.6 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene-d5 <surr> | 74 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/11/10 | JDH |
| Phenol-d6 <surr> | 77.6 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/11/10 | JDH |
| Terphenyl-d14 <surr> | 107 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/11/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 96.3 | | % | SM20 2540G | | | | 07/01/10 | AHJ |



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 12.2 | 1.10 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.326 | 0.221 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 37.7 | 0.442 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 6.28 | 0.221 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,1-Trichloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1,2-Trichloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloroethene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,1-Dichloropropene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,3-Trichloropropane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trichlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2,4-Trimethylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 135 U | 135 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dibromoethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloroethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,2-Dichloropropane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3,5-Trimethylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,3-Dichloropropane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 1,4-Dichlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2,2-Dichloropropane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 337 U | 337 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Chlorotoluene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Hexanone | 337 U | 337 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Chlorotoluene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Isopropyltoluene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 337 U | 337 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Benzene | 16.9 U | 16.9 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromochloromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromodichloromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromoform | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromomethane | 270 U | 270 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon disulfide | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon tetrachloride | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chlorobenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroethane | 270 U | 270 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroform | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,2-Dichloroethene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,3-Dichloropropene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromochloromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromomethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dichlorodifluoromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Ethylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Hexachlorobutadiene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Isopropylbenzene (Cumene) | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methylene chloride | 135 U | 135 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methyl-t-butyl ether | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Naphthalene | 67.5 U | 67.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| n-Butylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|-------------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| o-Xylene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| P & M -Xylene | 67.5 U | 67.5 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| sec-Butylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Styrene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| tert-Butylbenzene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Tetrachloroethene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Toluene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,2-Dichloroethene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,3-Dichloropropene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichloroethene | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichlorofluoromethane | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Vinyl chloride | 33.7 U | 33.7 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Xylenes (total) | 101 U | 101 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 96.1 | | % | SW8260B | B | 69-132 | | 07/05/10 | DSH |
| 4-Bromofluorobenzene <surr> | 96.7 | | % | SW8260B | B | 65-144 | | 07/05/10 | DSH |
| Toluene-d8 <surr> | 106 | | % | SW8260B | B | 84-124 | | 07/05/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,2-Dichlorobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,3-Dichlorobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,4-Dichlorobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4,5-Trichlorophenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4,6-Trichlorophenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dichlorophenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dimethylphenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dinitrophenol | 3.55 U | 3.55 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,6-Dinitrotoluene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chloronaphthalene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chlorophenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 2.37 U | 2.37 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylnaphthalene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylphenol (o-Cresol) | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitroaniline | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitrophenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 1.18 U | 1.18 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3,3-Dichlorobenzidine | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3-Nitroaniline | 0.592 U | 0.592 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Bromophenyl-phenylether | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloro-3-methylphenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloroaniline | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chlorophenyl-phenylether | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitroaniline | 3.55 U | 3.55 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitrophenol | 1.18 U | 1.18 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthylene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Aniline | 2.37 U | 2.37 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Anthracene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Azobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo(a)Anthracene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[a]pyrene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[b]Fluoranthene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[g,h,i]perylene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[k]fluoranthene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzoic acid | 1.78 U | 1.78 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzyl alcohol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethoxy)methane | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethyl)ether | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Butylbenzylphthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Chrysene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzo[a,h]anthracene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzofuran | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Diethylphthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dimethylphthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Di-n-butylphthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| di-n-Octylphthalate | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluoranthene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluorene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobutadiene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorocyclopentadiene | 0.829 U | 0.829 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachloroethane | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Isophorone | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Naphthalene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodimethylamine | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitroso-di-n-propylamine | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodiphenylamine | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pentachlorophenol | 2.37 U | 2.37 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenanthrene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenol | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pyrene | 0.296 U | 0.296 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |

Surrogates



SGS Ref.# 1103191004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-6B2S4
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 18:40
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 82 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorobiphenyl <surr> | 62 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorophenol <surr> | 60.8 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene-d5 <surr> | 57.3 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/11/10 | JDH |
| Phenol-d6 <surr> | 63.5 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/11/10 | JDH |
| Terphenyl-d14 <surr> | 105 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/11/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 84.1 | | % | SM20 2540G | | | | 07/01/10 | AHJ |



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

8270D - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--------------------------------|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Metals by ICP/MS</u> | | | | | | | | | |
| Arsenic | 6.65 | 1.22 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Cadmium | 0.243 U | 0.243 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Chromium | 13.4 | 0.486 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |
| Lead | 16.8 | 0.243 | mg/Kg | SW6020 | A | | 07/02/10 | 07/06/10 | KDC |

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|-----------------------------|--------|------|-------|---------|---|--|----------|-----|
| 1,1,1,2-Tetrachloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,1-Trichloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1,2-Trichloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloroethene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,1-Dichloropropene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,3-Trichlorobenzene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,3-Trichloropropane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,4-Trichlorobenzene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2,4-Trimethylbenzene | 31400 | 943 | ug/Kg | SW8260B | B | | 07/06/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 189 U | 189 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dibromoethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dichlorobenzene | 12000 | 943 | ug/Kg | SW8260B | B | | 07/06/10 | DSH |
| 1,2-Dichloroethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,2-Dichloropropane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,3,5-Trimethylbenzene | 10000 | 943 | ug/Kg | SW8260B | B | | 07/06/10 | DSH |
| 1,3-Dichlorobenzene | 513 | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,3-Dichloropropane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 1,4-Dichlorobenzene | 1680 | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |
| 2,2-Dichloropropane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | 07/05/10 | DSH |



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 472 U | 472 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Chlorotoluene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 2-Hexanone | 472 U | 472 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Chlorotoluene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Isopropyltoluene | 940 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 472 U | 472 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Benzene | 52.3 | 23.6 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromobenzene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromochloromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromodichloromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromoform | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Bromomethane | 377 U | 377 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon disulfide | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Carbon tetrachloride | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chlorobenzene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroethane | 377 U | 377 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloroform | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Chloromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| cis-1,2-Dichloroethene | 6120 | 943 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| cis-1,3-Dichloropropene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromochloromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dibromomethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Dichlorodifluoromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Ethylbenzene | 1710 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Hexachlorobutadiene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Isopropylbenzene (Cumene) | 1220 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methylene chloride | 189 U | 189 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Methyl-t-butyl ether | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Naphthalene | 13700 | 1890 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| n-Butylbenzene | 1250 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|-------------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| n-Propylbenzene | 2320 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| o-Xylene | 9920 | 943 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| P & M -Xylene | 10700 | 1890 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| sec-Butylbenzene | 1070 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Styrene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| tert-Butylbenzene | 97.1 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Tetrachloroethene | 2460 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Toluene | 1930 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,2-Dichloroethene | 51.9 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| trans-1,3-Dichloropropene | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichloroethene | 295 | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Trichlorofluoromethane | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Vinyl chloride | 47.2 U | 47.2 | ug/Kg | SW8260B | B | | | 07/05/10 | DSH |
| Xylenes (total) | 20600 | 2830 | ug/Kg | SW8260B | B | | | 07/06/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 98.2 | | % | SW8260B | B | 69-132 | | 07/05/10 | DSH |
| 4-Bromofluorobenzene <surr> | 126 | | % | SW8260B | B | 65-144 | | 07/05/10 | DSH |
| Toluene-d8 <surr> | 109 | | % | SW8260B | B | 84-124 | | 07/05/10 | DSH |
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,2-Dichlorobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,3-Dichlorobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 1,4-Dichlorobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4,5-Trichlorophenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4,6-Trichlorophenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dichlorophenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dimethylphenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |
| 2,4-Dinitrophenol | 77.8 U | 77.8 | mg/Kg | SW8270D | A | | | 07/09/10 07/11/10 | JDH |



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 2,4-Dinitrotoluene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2,6-Dinitrotoluene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chloronaphthalene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Chlorophenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methyl-4,6-dinitrophenol | 51.9 U | 51.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylnaphthalene | 39.9 | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Methylphenol (o-Cresol) | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitroaniline | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 2-Nitrophenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3&4-Methylphenol (p&m-Cresol) | 25.9 U | 25.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3,3-Dichlorobenzidine | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 3-Nitroaniline | 13.0 U | 13.0 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Bromophenyl-phenylether | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloro-3-methylphenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chloroaniline | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Chlorophenyl-phenylether | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitroaniline | 77.8 U | 77.8 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| 4-Nitrophenol | 25.9 U | 25.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Acenaphthylene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Aniline | 51.9 U | 51.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Anthracene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Azobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo(a)Anthracene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[a]pyrene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[b]Fluoranthene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[g,h,i]perylene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzo[k]fluoranthene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzoic acid | 38.9 U | 38.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Benzyl alcohol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|-----------------------------------|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2chloro1methylethyl)Ether | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethoxy)methane | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Bis(2-Chloroethyl)ether | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| bis(2-Ethylhexyl)phthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Butylbenzylphthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Chrysene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzo[a,h]anthracene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dibenzofuran | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Diethylphthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Dimethylphthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Di-n-butylphthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| di-n-Octylphthalate | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluoranthene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Fluorene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorobutadiene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachlorocyclopentadiene | 18.1 U | 18.1 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Hexachloroethane | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Indeno[1,2,3-c,d] pyrene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Isophorone | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Naphthalene | 9.15 | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodimethylamine | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitroso-di-n-propylamine | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| N-Nitrosodiphenylamine | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pentachlorophenol | 51.9 U | 51.9 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenanthrene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Phenol | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |
| Pyrene | 6.48 U | 6.48 | mg/Kg | SW8270D | A | | 07/09/10 | 07/11/10 | JDH |

Surrogates



SGS Ref.# 1103191005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-7B1S2
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/30/2010 10:35
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-----|-------|------------|--------------|------------------|-----------|---------------|------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | 74.9 | | % | SW8270D | A | 47-125 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorobiphenyl <surr> | 79.7 | | % | SW8270D | A | 45-105 | 07/09/10 | 07/11/10 | JDH |
| 2-Fluorophenol <surr> | 47.3 | | % | SW8270D | A | 41-84 | 07/09/10 | 07/11/10 | JDH |
| Nitrobenzene-d5 <surr> | 67.5 | | % | SW8270D | A | 37-100 | 07/09/10 | 07/11/10 | JDH |
| Phenol-d6 <surr> | 58.8 | | % | SW8270D | A | 48-94 | 07/09/10 | 07/11/10 | JDH |
| Terphenyl-d14 <surr> | 90.7 | | % | SW8270D | A | 50-120 | 07/09/10 | 07/11/10 | JDH |
| <u>Solids</u> | | | | | | | | | |
| Total Solids | 76.1 | | % | SM20 2540G | | | | 07/01/10 | AHJ |



SGS Ref.# 1103191006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 8:00
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

Sample Remarks:

8260B - Several analytes detected in the TB. The analytes were non-detect or over 10 times the amount found in the TB in the associated samples.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,1-Trichloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1,2-Trichloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloroethene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,1-Dichloropropene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,3-Trichlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,3-Trichloropropane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,4-Trichlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2,4-Trimethylbenzene | 55.2 | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 100 U | 100 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dibromoethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichloroethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,2-Dichloropropane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3,5-Trimethylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3-Dichlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,3-Dichloropropane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 1,4-Dichlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2,2-Dichloropropane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Butanone (MEK) | 251 U | 251 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Chlorotoluene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 2-Hexanone | 251 U | 251 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Chlorotoluene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Isopropyltoluene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| 4-Methyl-2-pentanone (MIBK) | 251 U | 251 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |



SGS Ref.# 1103191006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 8:00
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Benzene | 12.5 U | 12.5 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromochloromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromodichloromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromoform | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Bromomethane | 201 U | 201 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Carbon disulfide | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Carbon tetrachloride | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chlorobenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloroethane | 201 U | 201 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloroform | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Chloromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| cis-1,2-Dichloroethene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| cis-1,3-Dichloropropene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dibromochloromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dibromomethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Dichlorodifluoromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Ethylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Hexachlorobutadiene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Isopropylbenzene (Cumene) | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Methylene chloride | 100 U | 100 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Methyl-t-butyl ether | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Naphthalene | 50.2 U | 50.2 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| n-Butylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| n-Propylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| o-Xylene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| P & M -Xylene | 50.2 U | 50.2 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| sec-Butylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Styrene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| tert-Butylbenzene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |



SGS Ref.# 1103191006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Client Sample ID 17368-2TB
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Collected Date/Time 06/29/2010 8:00
Received Date/Time 07/01/2010 10:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Tetrachloroethene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Toluene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| trans-1,2-Dichloroethene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| trans-1,3-Dichloropropene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Trichloroethene | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Trichlorofluoromethane | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Vinyl chloride | 25.1 U | 25.1 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Xylenes (total) | 75.3 U | 75.3 | ug/Kg | SW8260B | A | | | 07/04/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 104 | | % | SW8260B | A | 69-132 | | 07/04/10 | DSH |
| 4-Bromofluorobenzene <surr> | 93.8 | | % | SW8260B | A | 65-144 | | 07/04/10 | DSH |
| Toluene-d8 <surr> | 105 | | % | SW8260B | A | 84-124 | | 07/04/10 | DSH |



SGS Ref.# 970868 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch
Method
Date

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 07/01/10 |
| Batch | SPT8173 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 971126 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/06/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/06/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971430 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch
Method
Date

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005, 1103191006

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971430 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch
Method
Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|---|---------|--------|------|-------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | |
| 1,1,1,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,1-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,2,2-Tetrachloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1,2-Trichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,1-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,3-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,3-Trichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,4-Trichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2,4-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dibromo-3-chloropropane | 62.0 U | 100 | 31.0 | ug/Kg | 07/04/10 |
| 1,2-Dibromoethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichloroethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3,5-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,3-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 1,4-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2,2-Dichloropropane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2-Butanone (MEK) | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| 2-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 2-Hexanone | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| 4-Chlorotoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 4-Isopropyltoluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| 4-Methyl-2-pentanone (MIBK) | 156 U | 250 | 78.0 | ug/Kg | 07/04/10 |
| Benzene | 7.80 U | 12.5 | 3.90 | ug/Kg | 07/04/10 |
| Bromobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromodichloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromoform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Bromomethane | 124 U | 200 | 62.0 | ug/Kg | 07/04/10 |
| Carbon disulfide | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Carbon tetrachloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chloroethane | 124 U | 200 | 62.0 | ug/Kg | 07/04/10 |
| Chloroform | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Chloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |



SGS Ref.# 971430 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|--------|------|------|-------|----------|
| cis-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| cis-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dibromochloromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dibromomethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Dichlorodifluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Ethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Hexachlorobutadiene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Isopropylbenzene (Cumene) | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Methylene chloride | 62.0 U | 100 | 31.0 | ug/Kg | 07/04/10 |
| Methyl-t-butyl ether | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Naphthalene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/04/10 |
| n-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| n-Propylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| o-Xylene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| P & M -Xylene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/04/10 |
| sec-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Styrene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| tert-Butylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Tetrachloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Toluene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| trans-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| trans-1,3-Dichloropropene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Trichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Trichlorofluoromethane | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Vinyl chloride | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/04/10 |
| Xylenes (total) | 47.0 U | 75.0 | 23.5 | ug/Kg | 07/04/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 101 | 69-132 | | % | 07/04/10 |
| 4-Bromofluorobenzene <surr> | 95.5 | 65-144 | | % | 07/04/10 |
| Toluene-d8 <surr> | 111 | 84-124 | | % | 07/04/10 |

Batch VMS11345
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971495 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch Method Date

QC results affect the following production samples:
 1103191001, 1103191002, 1103191005

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|---|---------------------------|--------|------|-------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | |
| 1,2,4-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/05/10 |
| 1,2-Dichlorobenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/05/10 |
| 1,3,5-Trimethylbenzene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/05/10 |
| cis-1,2-Dichloroethene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/05/10 |
| Naphthalene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/05/10 |
| o-Xylene | 15.6 U | 25.0 | 7.80 | ug/Kg | 07/05/10 |
| P & M -Xylene | 30.0 U | 50.0 | 15.0 | ug/Kg | 07/05/10 |
| Xylenes (total) | 47.0 U | 75.0 | 23.5 | ug/Kg | 07/05/10 |
| Surrogates | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 100 | 69-132 | | % | 07/05/10 |
| 4-Bromofluorobenzene <surr> | 92.7 | 65-144 | | % | 07/05/10 |
| Toluene-d8 <surr> | 103 | 84-124 | | % | 07/05/10 |
| Batch | VMS11346 | | | | |
| Method | SW8260B | | | | |
| Instrument | HP 5890 Series II MS5 VLA | | | | |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972382 Method Blank
 Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-17368 DOT/PF Stations
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------------------------------|---------|--------|--------|-------|---------------|
| Semivolatile Organic GC/MS | | | | | |
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/10/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/10/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |



SGS Ref.# 972382 Method Blank
 Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-17368 DOT/PF Stations
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|--------------------------------|---------|-------|--------|-------|----------|
| Bis(2chloro 1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/10/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 89.7 | 47-125 | | % | 07/10/10 |
| 2-Fluorobiphenyl <surr> | 78.6 | 45-105 | | % | 07/10/10 |
| 2-Fluorophenol <surr> | 75.6 | 41-84 | | % | 07/10/10 |
| Nitrobenzene-d5 <surr> | 70.7 | 37-100 | | % | 07/10/10 |
| Phenol-d6 <surr> | 74.2 | 48-94 | | % | 07/10/10 |
| Terphenyl-d14 <surr> | 108 | 50-120 | | % | 07/10/10 |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

Batch XMS5509
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 970869 Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Original 1103180004
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch
Method
Date

QC results affect the following production samples:
1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|--------------|------------|------|---|---|--------|------------|
| Total Solids | 84.9 | 83.4 | % | 2 | (< 15) | 07/01/2010 |
| Batch | SPT8173 | | | | | |
| Method | SM20 2540G | | | | | |
| Instrument | | | | | | |



SGS Ref.# 971127 Lab Control Sample
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

QC results affect the following production samples:
 1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------|-----------------|------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | |
| Arsenic | LCS | 48.6 | 97 | (80-120) | | 50 mg/Kg | 07/06/2010 |
| Cadmium | LCS | 4.72 | 94 | (80-120) | | 5 mg/Kg | 07/06/2010 |
| Chromium | LCS | 18.9 | 95 | (80-120) | | 20 mg/Kg | 07/06/2010 |
| Lead | LCS | 47.1 | 94 | (80-120) | | 50 mg/Kg | 07/06/2010 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Method
Date

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005, 1103191006

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|---------------|--------------|--------------------|-----|---------------|------------------|------------------|
|-----------|---------------|--------------|--------------------|-----|---------------|------------------|------------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
 Prep Batch Method Date

Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-17368 DOT/PF Stations
 Matrix Soil/Solid (dry weight)

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 830 | 111 | (77-123) | | 750 ug/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | LCS | 786 | 105 | (77-129) | | 750 ug/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 769 | 102 | (80-122) | | 750 ug/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | LCS | 717 | 96 | (85-121) | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethane | LCS | 786 | 105 | (81-126) | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethene | LCS | 843 | 112 | (75-125) | | 750 ug/Kg | 07/04/2010 |
| 1,1-Dichloropropene | LCS | 773 | 103 | (76-134) | | 750 ug/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | LCS | 764 | 102 | (78-124) | | 750 ug/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | LCS | 678 | 90 | (77-125) | | 750 ug/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | LCS | 814 | 109 | (77-126) | | 750 ug/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | LCS | 759 | 101 | (85-121) | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 742 | 99 | (60-135) | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dibromoethane | LCS | 789 | 105 | (85-124) | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | LCS | 760 | 101 | (88-113) | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichloroethane | LCS | 728 | 97 | (83-121) | | 750 ug/Kg | 07/04/2010 |
| 1,2-Dichloropropane | LCS | 769 | 103 | (81-120) | | 750 ug/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | LCS | 737 | 98 | (87-120) | | 750 ug/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | LCS | 748 | 100 | (86-117) | | 750 ug/Kg | 07/04/2010 |
| 1,3-Dichloropropane | LCS | 822 | 110 | (84-123) | | 750 ug/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | LCS | 779 | 104 | (86-118) | | 750 ug/Kg | 07/04/2010 |
| 2,2-Dichloropropane | LCS | 786 | 105 | (69-132) | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|-----------------------------|-----|------|-----|------------|--|------------|------------|
| 2-Butanone (MEK) | LCS | 1940 | 86 | (57-135) | | 2250 ug/Kg | 07/04/2010 |
| 2-Chlorotoluene | LCS | 739 | 99 | (81-122) | | 750 ug/Kg | 07/04/2010 |
| 2-Hexanone | LCS | 2170 | 96 | (58-145) | | 2250 ug/Kg | 07/04/2010 |
| 4-Chlorotoluene | LCS | 765 | 102 | (84-120) | | 750 ug/Kg | 07/04/2010 |
| 4-Isopropyltoluene | LCS | 780 | 104 | (83-121) | | 750 ug/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2550 | 114 | (67-135) | | 2250 ug/Kg | 07/04/2010 |
| Benzene | LCS | 753 | 100 | (81-124) | | 750 ug/Kg | 07/04/2010 |
| Bromobenzene | LCS | 768 | 102 | (86-119) | | 750 ug/Kg | 07/04/2010 |
| Bromochloromethane | LCS | 796 | 106 | (79-125) | | 750 ug/Kg | 07/04/2010 |
| Bromodichloromethane | LCS | 769 | 103 | (81-127) | | 750 ug/Kg | 07/04/2010 |
| Bromoform | LCS | 795 | 106 | (72-135) | | 750 ug/Kg | 07/04/2010 |
| Bromomethane | LCS | 726 | 97 | (49-141) | | 750 ug/Kg | 07/04/2010 |
| Carbon disulfide | LCS | 1210 | 107 | (58-155) | | 1130 ug/Kg | 07/04/2010 |
| Carbon tetrachloride | LCS | 763 | 102 | (79-128) | | 750 ug/Kg | 07/04/2010 |
| Chlorobenzene | LCS | 794 | 106 | (84-121) | | 750 ug/Kg | 07/04/2010 |
| Chloroethane | LCS | 745 | 99 | (51-141) | | 750 ug/Kg | 07/04/2010 |
| Chloroform | LCS | 769 | 103 | (77-124) | | 750 ug/Kg | 07/04/2010 |
| Chloromethane | LCS | 836 | 111 | (54-129) | | 750 ug/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | LCS | 771 | 103 | (82-124) | | 750 ug/Kg | 07/04/2010 |
| cis-1,3-Dichloropropene | LCS | 791 | 105 | (82-122) | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| Dibromochloromethane | LCS | 800 | 107 | (84-125) | | 750 ug/Kg | 07/04/2010 |
| Dibromomethane | LCS | 777 | 104 | (80-123) | | 750 ug/Kg | 07/04/2010 |
| Dichlorodifluoromethane | LCS | 910 | 121 | (43-135) | | 750 ug/Kg | 07/04/2010 |
| Ethylbenzene | LCS | 805 | 107 | (87-119) | | 750 ug/Kg | 07/04/2010 |
| Hexachlorobutadiene | LCS | 722 | 96 | (74-124) | | 750 ug/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | LCS | 828 | 110 | (89-121) | | 750 ug/Kg | 07/04/2010 |
| Methylene chloride | LCS | 738 | 98 | (63-137) | | 750 ug/Kg | 07/04/2010 |
| Methyl-t-butyl ether | LCS | 1140 | 101 | (76-133) | | 1130 ug/Kg | 07/04/2010 |
| Naphthalene | LCS | 710 | 95 | (73-131) | | 750 ug/Kg | 07/04/2010 |
| n-Butylbenzene | LCS | 772 | 103 | (82-127) | | 750 ug/Kg | 07/04/2010 |
| n-Propylbenzene | LCS | 736 | 98 | (82-125) | | 750 ug/Kg | 07/04/2010 |
| o-Xylene | LCS | 802 | 107 | (89-120) | | 750 ug/Kg | 07/04/2010 |
| P & M -Xylene | LCS | 1660 | 111 | (88-121) | | 1500 ug/Kg | 07/04/2010 |
| sec-Butylbenzene | LCS | 747 | 100 | (84-122) | | 750 ug/Kg | 07/04/2010 |
| Styrene | LCS | 794 | 106 | (91-120) | | 750 ug/Kg | 07/04/2010 |
| tert-Butylbenzene | LCS | 724 | 97 | (82-122) | | 750 ug/Kg | 07/04/2010 |
| Tetrachloroethene | LCS | 745 | 99 | (82-125) | | 750 ug/Kg | 07/04/2010 |
| Toluene | LCS | 846 | 113 | (87-119) | | 750 ug/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | LCS | 785 | 105 | (79-125) | | 750 ug/Kg | 07/04/2010 |
| trans-1,3-Dichloropropene | LCS | 821 | 109 | (86-122) | | 750 ug/Kg | 07/04/2010 |
| Trichloroethene | LCS | 798 | 106 | (77-124) | | 750 ug/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
 Prep Batch

Client Name Shannon & Wilson, Inc.
 Project Name/# 32-1-17368 DOT/PF Stations
 Matrix Soil/Solid (dry weight)

Method
 Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-----|----|------------|--|-----------|------------|
| Trichlorofluoromethane | LCS | 728 | 97 | (64-139) | | 750 ug/Kg | 07/04/2010 |
|------------------------|-----|-----|----|------------|--|-----------|------------|

| | | | | | | | |
|----------------|-----|-----|-----|------------|--|-----------|------------|
| Vinyl chloride | LCS | 843 | 112 | (67-125) | | 750 ug/Kg | 07/04/2010 |
|----------------|-----|-----|-----|------------|--|-----------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2460 | 109 | (89-120) | | 2250 ug/Kg | 07/04/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 99 | (69-132) | | | 07/04/2010 |
|------------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 95 | (65-144) | | | 07/04/2010 |
|-----------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 109 | (84-124) | | | 07/04/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11345
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971496 Lab Control Sample

Printed Date/Time 07/14/2010 11:33
Prep Batch

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Method
Date

QC results affect the following production samples:
1103191001, 1103191002, 1103191005

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|------|-----|------------|--|------------|------------|
| 1,2,4-Trimethylbenzene | LCS | 692 | 92 | (85-121) | | 750 ug/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | LCS | 757 | 101 | (88-113) | | 750 ug/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | LCS | 754 | 101 | (87-120) | | 750 ug/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | LCS | 809 | 108 | (82-124) | | 750 ug/Kg | 07/06/2010 |
| Naphthalene | LCS | 645 | 86 | (73-131) | | 750 ug/Kg | 07/06/2010 |
| o-Xylene | LCS | 804 | 107 | (89-120) | | 750 ug/Kg | 07/06/2010 |
| P & M -Xylene | LCS | 1530 | 102 | (88-121) | | 1500 ug/Kg | 07/06/2010 |
| Xylenes (total) | LCS | 2340 | 104 | (89-120) | | 2250 ug/Kg | 07/06/2010 |

Surrogates

| | | | | | | | |
|------------------------------|-----|--|-----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 100 | (69-132) | | | 07/06/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 99 | (65-144) | | | 07/06/2010 |
| Toluene-d8 <surr> | LCS | | 103 | (84-124) | | | 07/06/2010 |

Batch VMS11346
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/14/2010 11:33

Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

QC results affect the following production samples:

1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972384 Lab Control Sample
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep XXX23007
Batch SW3550C
Method
Date 07/09/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 3.20 | 72 | (54-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | LCS | 3.15 | 71 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | LCS | 3.05 | 69 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | LCS | 3.02 | 68 | (51-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | LCS | 3.85 | 87 | (71-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.83 | 86 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | LCS | 3.34 | 75 | (64-107) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | LCS | 3.46 | 78 | (63-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | LCS | 6.99 | 87 | (43-130) | | | 8 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | LCS | 4.47 | 101 | (64-115) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | LCS | 4.09 | 92 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | LCS | 3.18 | 72 | (52-103) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | LCS | 3.22 | 72 | (56-94) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.43 | 105 | (51-131) | | | 8 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | LCS | 3.52 | 79 | (61-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.20 | 72 | (61-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | LCS | 4.07 | 92 | (70-120) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | LCS | 3.39 | 76 | (65-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.91 | 79 | (65-105) | | | 6.22 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.29 | 97 | (49-128) | | | 4.44 mg/Kg | 07/10/2010 |
| 3-Nitroaniline | LCS | 4.15 | 93 | (66-110) | | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep XXX23007
Batch SW3550C
Method
Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 4-Bromophenyl-phenylether | LCS | 3.39 | 76 | (53-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.70 | 83 | (69-114) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | LCS | 3.24 | 73 | (58-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.69 | 83 | (53-110) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | LCS | 4.11 | 92 | (63-115) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | LCS | 6.19 | 100 | (44-137) | | 6.22 mg/Kg | 07/10/2010 |
| Acenaphthene | LCS | 3.76 | 85 | (57-110) | | 4.44 mg/Kg | 07/10/2010 |
| Acenaphthylene | LCS | 3.79 | 85 | (56-105) | | 4.44 mg/Kg | 07/10/2010 |
| Aniline | LCS | 2.65 | 60 | (40-92) | | 4.44 mg/Kg | 07/10/2010 |
| Anthracene | LCS | 4.18 | 94 | (65-105) | | 4.44 mg/Kg | 07/10/2010 |
| Azobenzene | LCS | 4.01 | 90 | (54-120) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | LCS | 4.35 | 98 | (72-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | LCS | 4.51 | 101 | (71-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | LCS | 4.30 | 97 | (70-115) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | LCS | 4.72 | 106 | (52-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | LCS | 4.17 | 94 | (66-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzoic acid | LCS | 3.42 | 55 | (25-76) | | 6.22 mg/Kg | 07/10/2010 |
| Benzyl alcohol | LCS | 3.43 | 77 | (61-110) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 3.20 | 72 | (50-97) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethoxy)methane | LCS | 3.44 | 77 | (57-104) | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep XXX23007
Batch SW3550C
Method
Date 07/09/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| Bis(2-Chloroethyl)ether | LCS | 3.09 | 70 | (49-91) | | | 4.44 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.73 | 106 | (62-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | LCS | 4.77 | 107 | (69-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Chrysene | LCS | 4.38 | 99 | (72-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.82 | 108 | (61-125) | | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzofuran | LCS | 3.86 | 87 | (60-105) | | | 4.44 mg/Kg | 07/10/2010 |
| Diethylphthalate | LCS | 4.29 | 97 | (50-115) | | | 4.44 mg/Kg | 07/10/2010 |
| Dimethylphthalate | LCS | 4.04 | 91 | (59-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | LCS | 4.40 | 99 | (56-110) | | | 4.44 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | LCS | 4.91 | 111 | (61-123) | | | 4.44 mg/Kg | 07/10/2010 |
| Fluoranthene | LCS | 4.41 | 99 | (64-115) | | | 4.44 mg/Kg | 07/10/2010 |
| Fluorene | LCS | 3.89 | 88 | (64-110) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | LCS | 4.26 | 96 | (63-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | LCS | 3.60 | 81 | (57-107) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | LCS | 3.81 | 86 | (35-102) | | | 4.44 mg/Kg | 07/10/2010 |
| Hexachloroethane | LCS | 3.13 | 70 | (51-89) | | | 4.44 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.77 | 107 | (60-120) | | | 4.44 mg/Kg | 07/10/2010 |
| Isophorone | LCS | 3.52 | 79 | (57-108) | | | 4.44 mg/Kg | 07/10/2010 |
| Naphthalene | LCS | 3.32 | 75 | (51-105) | | | 4.44 mg/Kg | 07/10/2010 |
| Nitrobenzene | LCS | 3.45 | 78 | (53-99) | | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | LCS | 3.09 | 70 | (45-90) | | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17368 DOT/PF Stations
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/14/2010 11:33
Prep **Batch** XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|----|------------|--|------------|------------|
| N-Nitroso-di-n-propylamine | LCS | 3.09 | 69 | (59-100) | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | LCS | 3.25 | 73 | (61-114) | | 4.44 mg/Kg | 07/10/2010 |
| Pentachlorophenol | LCS | 6.10 | 98 | (56-117) | | 6.22 mg/Kg | 07/10/2010 |
| Phenanthrene | LCS | 4.17 | 94 | (63-110) | | 4.44 mg/Kg | 07/10/2010 |
| Phenol | LCS | 3.27 | 74 | (56-97) | | 4.44 mg/Kg | 07/10/2010 |
| Pyrene | LCS | 4.25 | 96 | (70-123) | | 4.44 mg/Kg | 07/10/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 96 | (47-125) | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 83 | (45-105) | | | 07/10/2010 |
| 2-Fluorophenol <surr> | LCS | | 72 | (41-84) | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 78 | (37-100) | | | 07/10/2010 |
| Phenol-d6 <surr> | LCS | | 75 | (48-94) | | | 07/10/2010 |
| Terphenyl-d14 <surr> | LCS | | 101 | (50-120) | | | 07/10/2010 |

Batch XMS5509
Method SW8270D
Instrument HP 6890/5973 SSA



| | | | | |
|------------------|-------------------------|------------------------|--------------------------|----------------------------------|
| SGS Ref.# | 971128 | Matrix Spike | Printed Date/Time | 07/14/2010 11:33 |
| | 971129 | Matrix Spike Duplicate | Prep | MXX23173 |
| | | | Batch | Soils/Solids Digest for Metals b |
| | | | Method | 07/02/2010 |
| | | | Date | |
| Original | 1103191001 | | | |
| Matrix | Soil/Solid (dry weight) | | | |

QC results affect the following production samples:
 1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------------------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | MS | 9.95 | 59.9 | 98 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 61.9 | 98 | | 3 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Cadmium | MS | 0.250 | 4.99 | 93 | (80-120) | | | 5.08 mg/Kg | 07/06/2010 |
| | MSD | | 5.28 | 95 | | 6 | (< 20) | 5.30 mg/Kg | 07/06/2010 |
| Chromium | MS | 37.3 | 59.7 | 110 | (80-120) | | | 20.3 mg/Kg | 07/06/2010 |
| | MSD | | 57.2 | 94 | | 4 | (< 20) | 21.2 mg/Kg | 07/06/2010 |
| Lead | MS | 7.16 | 52.6 | 89 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 54.6 | 90 | | 4 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Batch | MMS6508 | | | | | | | | |
| Method | SW6020 | | | | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | | | | |



SGS Ref.# 971433 Matrix Spike
971434 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
Prep Batch
Method
Date

Original 971432
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:
1103191001, 1103191002, 1103191003, 1103191004, 1103191005, 1103191006

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|----------|------|------|------------|---|---------|------------|------------|
| 1,1,1,2-Tetrachloroethane | MS | (30.6) U | 1620 | 110 | (77-123) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1710 | 117 | | 6 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | MS | (30.6) U | 1620 | 110 | (77-129) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1680 | 114 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (30.6) U | 1530 | 104 | (80-122) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1560 | 106 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | MS | (30.6) U | 1540 | 105 | (85-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1540 | 105 | | 0 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethane | MS | (30.6) U | 1550 | 106 | (81-126) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1610 | 110 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1-Dichloroethene | MS | (30.6) U | 1810 | 123 | (75-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1860 | 127* | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,1-Dichloropropene | MS | (30.6) U | 1570 | 107 | (76-134) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1700 | 116 | | 8 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | MS | (30.6) U | 1580 | 108 | (78-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1600 | 109 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | MS | (30.6) U | 1470 | 100 | (77-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1550 | 106 | | 6 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | MS | (30.6) U | 1550 | 105 | (77-126) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1690 | 115 | | 9 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | MS | (30.6) U | 1550 | 105 | (85-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1510 | 103 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (122) U | 1400 | 95 | (60-135) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1420 | 97 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2-Dibromoethane | MS | (30.6) U | 1690 | 115 | (85-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1640 | 112 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | MS | (30.6) U | 1570 | 107 | (88-113) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1640 | 112 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2-Dichloroethane | MS | (30.6) U | 1490 | 102 | (83-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1550 | 106 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,2-Dichloropropane | MS | (30.6) U | 1560 | 106 | (81-120) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1620 | 110 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | MS | (30.6) U | 1520 | 104 | (87-120) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1580 | 108 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | MS | (30.6) U | 1460 | 100 | (86-117) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1550 | 106 | | 6 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,3-Dichloropropane | MS | (30.6) U | 1650 | 113 | (84-123) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1650 | 112 | | 0 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | MS | (30.6) U | 1510 | 103 | (86-118) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1580 | 108 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 2,2-Dichloropropane | MS | (30.6) U | 1600 | 109 | (69-132) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1710 | 116 | | 7 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 2-Butanone (MEK) | MS | (306) U | 4820 | 110 | (57-135) | | | 4400 ug/Kg | 07/04/2010 |
| | MSD | | 4620 | 105 | | 4 | (< 20) | 4400 ug/Kg | 07/04/2010 |
| 2-Chlorotoluene | MS | (30.6) U | 1500 | 102 | (81-122) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1530 | 104 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 2-Hexanone | MS | (306) U | 4890 | 111 | (58-145) | | | 4400 ug/Kg | 07/04/2010 |
| | MSD | | 4800 | 109 | | 2 | (< 20) | 4400 ug/Kg | 07/04/2010 |
| 4-Chlorotoluene | MS | (30.6) U | 1510 | 103 | (84-120) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1570 | 107 | | 4 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 4-Isopropyltoluene | MS | (30.6) U | 1490 | 102 | (83-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1590 | 109 | | 7 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (306) U | 5160 | 117 | (67-135) | | | 4400 ug/Kg | 07/04/2010 |
| | MSD | | 4970 | 113 | | 4 | (< 20) | 4400 ug/Kg | 07/04/2010 |
| Benzene | MS | (15.3) U | 1590 | 108 | (81-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1620 | 111 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Bromobenzene | MS | (30.6) U | 1490 | 102 | (86-119) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1540 | 105 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Bromochloromethane | MS | (30.6) U | 1650 | 112 | (79-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1660 | 113 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Bromodichloromethane | MS | (30.6) U | 1540 | 105 | (81-127) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1580 | 108 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Bromoform | MS | (30.6) U | 1660 | 113 | (72-135) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1700 | 116 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Bromomethane | MS | (244) U | 1580 | 108 | (49-141) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1670 | 114 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Carbon disulfide | MS | (30.6) U | 2600 | 118 | (58-155) | | | 2200 ug/Kg | 07/04/2010 |
| | MSD | | 2670 | 121 | | 3 | (< 20) | 2200 ug/Kg | 07/04/2010 |
| Carbon tetrachloride | MS | (30.6) U | 1530 | 104 | (79-128) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1600 | 109 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Chlorobenzene | MS | (30.6) U | 1630 | 111 | (84-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1610 | 110 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Chloroethane | MS | (244) U | 1520 | 104 | (51-141) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1450 | 99 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Chloroform | MS | (30.6) U | 1560 | 106 | (77-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1580 | 108 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Chloromethane | MS | (30.6) U | 1510 | 103 | (54-129) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1550 | 106 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | MS | (30.6) U | 1600 | 109 | (82-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1640 | 112 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (30.6) U | 1610 | 110 | (82-122) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1690 | 115 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Dibromochloromethane | MS | (30.6) U | 1620 | 111 | (84-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1610 | 110 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Dibromomethane | MS | (30.6) U | 1590 | 109 | (80-123) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1610 | 110 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Dichlorodifluoromethane | MS | (30.6) U | 1750 | 120 | (43-135) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1780 | 121 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Ethylbenzene | MS | (30.6) U | 1660 | 113 | (87-119) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1680 | 115 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Hexachlorobutadiene | MS | (30.6) U | 1560 | 106 | (74-124) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1580 | 108 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | MS | (30.6) U | 1670 | 114 | (89-121) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1650 | 112 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Methylene chloride | MS | (122) U | 1460 | 99 | (63-137) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1520 | 104 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Methyl-t-butyl ether | MS | (30.6) U | 2320 | 105 | (76-133) | | | 2200 ug/Kg | 07/04/2010 |
| | MSD | | 2390 | 108 | | 3 | (< 20) | 2200 ug/Kg | 07/04/2010 |
| Naphthalene | MS | 39.8J | 1450 | 96 | (73-131) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1420 | 94 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| n-Butylbenzene | MS | (30.6) U | 1520 | 104 | (82-127) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1640 | 112 | | 8 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| n-Propylbenzene | MS | (30.6) U | 1540 | 105 | (82-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1520 | 104 | | 1 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| o-Xylene | MS | (30.6) U | 1670 | 114 | (89-120) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1700 | 116 | | 2 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| P & M -Xylene | MS | (58.8) U | 3370 | 115 | (88-121) | | | 2930 ug/Kg | 07/04/2010 |
| | MSD | | 3320 | 113 | | 2 | (< 20) | 2930 ug/Kg | 07/04/2010 |
| sec-Butylbenzene | MS | (30.6) U | 1510 | 103 | (84-122) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1560 | 106 | | 3 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Styrene | MS | (30.6) U | 1660 | 113 | (91-120) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1660 | 113 | | 0 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| tert-Butylbenzene | MS | (30.6) U | 1490 | 102 | (82-122) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1490 | 101 | | 0 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Tetrachloroethene | MS | (30.6) U | 1550 | 106 | (82-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1630 | 111 | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| Toluene | MS | (30.6) U | 1700 | 116 | (87-119) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1780 | 122* | | 5 | (< 20) | 1470 ug/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | MS | (30.6) U | 1640 | 112 | (79-125) | | | 1470 ug/Kg | 07/04/2010 |
| | MSD | | 1770 | 120 | | 8 | (< 20) | 1470 ug/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|----------|------|-----|------------|---|---------|------|------------------|
| trans-1,3-Dichloropropene | MS | (30.6) U | 1650 | 112 | (86-122) | | | 1470 | ug/Kg 07/04/2010 |
| | MSD | | 1590 | 109 | | 3 | (< 20) | 1470 | ug/Kg 07/04/2010 |
| Trichloroethene | MS | (30.6) U | 1620 | 110 | (77-124) | | | 1470 | ug/Kg 07/04/2010 |
| | MSD | | 1610 | 109 | | 1 | (< 20) | 1470 | ug/Kg 07/04/2010 |
| Trichlorofluoromethane | MS | (30.6) U | 1470 | 101 | (64-139) | | | 1470 | ug/Kg 07/04/2010 |
| | MSD | | 1460 | 99 | | 1 | (< 20) | 1470 | ug/Kg 07/04/2010 |
| Vinyl chloride | MS | (30.6) U | 1640 | 112 | (67-125) | | | 1470 | ug/Kg 07/04/2010 |
| | MSD | | 1630 | 111 | | 1 | (< 20) | 1470 | ug/Kg 07/04/2010 |
| Xylenes (total) | MS | (92.2) U | 5040 | 115 | (89-120) | | | 4400 | ug/Kg 07/04/2010 |
| | MSD | | 5020 | 114 | | 1 | (< 20) | 4400 | ug/Kg 07/04/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|------|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 1510 | 103 | (69-132) | | | | 07/04/2010 |
| | MSD | | 1510 | 103 | | 0 | | | 07/04/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 2200 | 72 | (65-144) | | | | 07/04/2010 |
| | MSD | | 2300 | 75 | | 4 | | | 07/04/2010 |
| Toluene-d8 <surr> | MS | | 1640 | 112 | (84-124) | | | | 07/04/2010 |
| | MSD | | 1710 | 117 | | 4 | | | 07/04/2010 |

Batch VMS11345
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971498 Matrix Spike
 971499 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch
 Method
 Date

Original 971497
 Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:
 1103191001, 1103191002, 1103191005

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|---------------------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 1,2,4-Trimethylbenzene | MS | (14.4) U | 712 | 103 | (85-121) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 719 | 104 | | 1 | (< 20) | 690 ug/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | MS | (14.4) U | 710 | 103 | (88-113) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 746 | 108 | | 5 | (< 20) | 690 ug/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | MS | (14.4) U | 742 | 107 | (87-120) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 759 | 110 | | 2 | (< 20) | 690 ug/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | MS | (14.4) U | 804 | 116 | (82-124) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 775 | 112 | | 4 | (< 20) | 690 ug/Kg | 07/06/2010 |
| Naphthalene | MS | (27.8) U | 643 | 93 | (73-131) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 672 | 97 | | 4 | (< 20) | 690 ug/Kg | 07/06/2010 |
| o-Xylene | MS | (14.4) U | 771 | 112 | (89-120) | | | 690 ug/Kg | 07/06/2010 |
| | MSD | | 781 | 113 | | 1 | (< 20) | 690 ug/Kg | 07/06/2010 |
| P & M -Xylene | MS | (27.8) U | 1550 | 112 | (88-121) | | | 1380 ug/Kg | 07/06/2010 |
| | MSD | | 1510 | 110 | | 2 | (< 20) | 1380 ug/Kg | 07/06/2010 |
| Xylenes (total) | MS | (43.4) U | 2320 | 112 | (89-120) | | | 2070 ug/Kg | 07/06/2010 |
| | MSD | | 2290 | 111 | | 1 | (< 20) | 2070 ug/Kg | 07/06/2010 |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | MS | | 704 | 102 | (69-132) | | | | 07/06/2010 |
| | MSD | | 730 | 106 | | 4 | | | 07/06/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 1600 | 103 | (65-144) | | | | 07/06/2010 |
| | MSD | | 1610 | 104 | | 1 | | | 07/06/2010 |
| Toluene-d8 <surr> | MS | | 770 | 111 | (84-124) | | | | 07/06/2010 |
| | MSD | | 800 | 116 | | 4 | | | 07/06/2010 |
| Batch | VMS11346 | | | | | | | | |
| Method | SW8260B | | | | | | | | |
| Instrument | HP 5890 Series II MS5 VLA | | | | | | | | |



SGS Ref.# 972388 Matrix Spike
972389 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
Prep Batch XXX23007
Method Sonication Extraction Soil SW8
Date 07/09/2010

Original 1103191001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
1103191001, 1103191002, 1103191003, 1103191004, 1103191005

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (5.26) U | 2.87 | 61 | (54-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | MS | (5.26) U | 2.70 | 57 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 17 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | MS | (5.26) U | 2.87 | 61 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.12 | 66 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | MS | (5.26) U | 2.69 | 57 | (51-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.93 | 62 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | MS | (5.26) U | 2.82 | 60* | (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.13 | 66* | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | MS | (5.26) U | 2.95 | 63* | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | MS | (5.26) U | 2.55 | 54* | (64-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.63 | 56* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | MS | (5.26) U | 3.34 | 71 | (63-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.35 | 71 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | MS | (63.2) U | 0.00 | 0* | (43-130) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | MS | (5.26) U | 3.80 | 81 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.88 | 82 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | MS | (5.26) U | 3.84 | 82 | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.01 | 64* | | 24 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | MS | (5.26) U | 3.02 | 64 | (52-103) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | MS | (5.26) U | 2.55 | 54* | (56-94) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.75 | 58 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (42.1) U | 13.3 | 158* | (51-131) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 13.3 | 156* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | MS | 8.67 | 11.1 | 52* | (61-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 11.4 | 59* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | MS | (5.26) U | 2.72 | 58* | (61-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.98 | 63 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | MS | (5.26) U | 3.28 | 70* | (70-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.58 | 76 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | MS | (5.26) U | 3.34 | 71 | (65-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cres) | MS | (21.1) U | 0.00 | 0* | (65-105) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 7.11 | 107* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | MS | (5.26) U | 2.86 | 61 | (49-128) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | 78 | | 26 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 3-Nitroaniline | MS | (10.5) U | 0.00 | | 0* (66-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Bromophenyl-phenylether | MS | (5.26) U | 2.51 | | 53 (53-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.95 | | 62 | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | MS | (5.26) U | 2.95 | | 63* (69-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.17 | | 67* | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | MS | (5.26) U | 2.09 | | 45* (58-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.45 | | 52* | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | MS | (5.26) U | 3.01 | | 64 (53-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.14 | | 66 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | MS | (63.2) U | 0.00 | | 0* (63-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | MS | (21.1) U | 0.00 | | 0* (44-137) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Acenaphthene | MS | (5.26) U | 3.60 | | 77 (57-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.95 | | 83 | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Acenaphthylene | MS | (5.26) U | 3.50 | | 75 (56-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.66 | | 77 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Aniline | MS | (42.1) U | 0.00 | | 0* (40-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Anthracene | MS | (5.26) U | 3.40 | | 72 (65-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.38 | | 71 | 1 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Azobenzene | MS | (5.26) U | 3.13 | | 67 (54-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | MS | (5.26) U | 3.34 | | 71* (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | | 78 | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | MS | (5.26) U | 3.43 | | 73 (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | | 75 | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | MS | (5.26) U | 0.00 | | 0* (70-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | MS | (5.26) U | 3.30 | | 70 (52-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | MS | (5.26) U | 2.68 | | 57* (66-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.26 | | 69 | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzoic acid | MS | (31.6) U | 0.00 | | 0* (25-76) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 16.3 | | 246* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Benzyl alcohol | MS | (5.26) U | 4.53 | | 96 (61-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.04 | | 106 | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2chloro1methylethyl)Ether | MS | (5.26) U | 2.88 | | 61 (50-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.09 | | 65 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2-Chloroethoxy)methane | MS | (5.26) U | 2.74 | 58 | (57-104) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethyl)ether | MS | (5.26) U | 2.79 | 59 | (49-91) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | MS | (5.26) U | 4.44 | 95 | (62-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.05 | 106 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | MS | (5.26) U | 3.68 | 78 | (69-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.93 | 83 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Chrysene | MS | (5.26) U | 3.40 | 72 | (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.61 | 76 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | MS | (5.26) U | 3.23 | 69 | (61-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.29 | 69 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzofuran | MS | (5.26) U | 3.58 | 76 | (60-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Diethylphthalate | MS | (5.26) U | 3.12 | 66 | (50-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.30 | 70 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dimethylphthalate | MS | (5.26) U | 2.95 | 63 | (59-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | 75 | | 18 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | MS | (5.26) U | 3.47 | 74 | (56-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.63 | 77 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | MS | (5.26) U | 3.48 | 74 | (61-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.71 | 78 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluoranthene | MS | (5.26) U | 3.61 | 77 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | 75 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluorene | MS | (5.26) U | 3.51 | 75 | (64-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | MS | (5.26) U | 3.45 | 73 | (63-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | MS | (5.26) U | 3.71 | 79 | (57-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.49 | 74 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | MS | (14.7) U | 0.00 | 0* | (35-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.34 | 92 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachloroethane | MS | (5.26) U | 7.09 | 151* | (51-89) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 8.94 | 189* | | 23 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | MS | (5.26) U | 3.21 | 68 | (60-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.45 | 73 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Isophorone | MS | (5.26) U | 4.23 | 90 | (57-108) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.41 | 93 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Naphthalene | MS | (5.26) U | 5.09 | 108* | (51-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.29 | 112* | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/14/2010 11:33
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | | | |
|----------------------------|-----|----------|------|-----|------------|----|---------|------------|------------|
| Nitrobenzene | MS | (5.26) U | 2.83 | 60 | (53-99) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | MS | (5.26) U | 1.92 | 41* | (45-90) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.08 | 44* | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitroso-di-n-propylamine | MS | (5.26) U | 2.41 | 51* | (59-100) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | MS | (5.26) U | 2.96 | 63 | (61-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.89 | 61 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pentachlorophenol | MS | (42.1) U | 0.00 | 0* | (56-117) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Phenanthrene | MS | (5.26) U | 3.70 | 79 | (63-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.06 | 86 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Phenol | MS | (5.26) U | 2.11 | 45* | (56-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 15 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pyrene | MS | (5.26) U | 3.34 | 71 | (70-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.50 | 74 | | 5 | (< 30) | 4.74 mg/Kg | 07/10/2010 |

Surrogates

| | | | | | | | | | |
|-----------------------------|-----|--|------|----|------------|----|--|--|------------|
| 2,4,6-Tribromophenol <surr> | MS | | 6.52 | 69 | (47-125) | | | | 07/10/2010 |
| | MSD | | 6.37 | 67 | | 2 | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | MS | | 3.38 | 72 | (45-105) | | | | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 11 | | | 07/10/2010 |
| 2-Fluorophenol <surr> | MS | | 4.02 | 43 | (41-84) | | | | 07/10/2010 |
| | MSD | | 4.97 | 53 | | 21 | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | MS | | 2.66 | 57 | (37-100) | | | | 07/10/2010 |
| | MSD | | 2.85 | 60 | | 7 | | | 07/10/2010 |
| Phenol-d6 <surr> | MS | | 5.07 | 54 | (48-94) | | | | 07/10/2010 |
| | MSD | | 5.49 | 58 | | 8 | | | 07/10/2010 |
| Terphenyl-d14 <surr> | MS | | 3.22 | 69 | (50-120) | | | | 07/10/2010 |
| | MSD | | 3.56 | 75 | | 10 | | | 07/10/2010 |

Batch XMS5509
 Method SW8270D
 Instrument HP 6890/5973 SSA

1103191



CHAIN-OF-CUST

SHANNON & WILSON, INC.
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303 Wellisian Way
 Richland, WA 99352
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Laboratory **SGS** Page 1 of 1
 Attn: Anchorage

Analysis Parameters/Sample Container Description
 (include preservative if used)

| Sample Identity | Lab No. | Time | Date Sampled | Analysis Parameters/Sample Container Description | | | | | | Remarks/Matrix |
|-----------------|---------|------|--------------|--|------|------------|------|------------------------------------|-------------|----------------|
| | | | | Comp. | Grab | EPA 8160 B | SNOC | EPA 827.02 Metals (As, Cd, Cr, Pb) | EPA 600/700 | |
| 17368-2B152 | ① A-B | 1117 | 6/29 | X | X | X | X | X | X | Soil |
| 17368-2B253 | ② | 1252 | 6/29 | X | X | X | X | X | X | Soil |
| 17368-6B152 | ③ | 1705 | 6/29 | X | X | X | X | X | X | Soil |
| 17368-6B254 | ④ | 1840 | 6/29 | X | X | X | X | X | X | Soil |
| 17368-7B152 | ⑤ | 1035 | 6/30 | X | X | X | X | X | X | Soil |
| 17368-2TB | ⑥ A | 800 | 6/29 | X | X | X | X | X | X | Soil |

Project Information

Project Number: 32-1-17368
 Project Name: DOT/PF Stations
 Contact: Haydar Turker
 Ongoing Project? Yes No
 Sampler: FAK

Sample Receipt

Total Number of Containers: 711
 COC Seals/Intact? Y/N/NA
 Received Good Cond./Cold
 Delivery Method:
 (attach shipping bill, if any)

Instructions

Requested Turnaround Time: 3 day Rush
 Special Instructions: Level II deliverables 15 jars for disperse
 Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - Job File

| Relinquished By: 1. | Relinquished By: 2. | Relinquished By: 3. |
|---|---|---|
| Signature: <u>Elizabeth A Karcheski</u> Printed Name: Elizabeth A Karcheski Company: Shannon & Wilson | Signature: _____ Printed Name: _____ Company: _____ | Signature: _____ Printed Name: _____ Company: _____ |
| Time: 10:30 AM Date: 6/29 | Time: _____ Date: _____ | Time: 10:50 Date: 7/10 |

AB. 5.4 #1D

1103191



SGS

SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|---|--|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | Yes No <input checked="" type="radio"/> N/A <input checked="" type="radio"/> Yes No N/A | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: <u>1</u> @ <u>5.4</u> w/ Therm.ID: <u>11D</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | Yes No <input checked="" type="radio"/> N/A Yes No <input checked="" type="radio"/> N/A | RUSH |
| Delivery method (specify all that apply): <input checked="" type="checkbox"/> Client USPS Alert Courier Road Runner AK Air Lynden Carlile ERA FedEx UPS NAC PenAir Other: | Note airbill/tracking # See Attached <input checked="" type="radio"/> or N/A | |
| * For samples received with payment, note amount (\$) and cash / check / CC (circle one). * For samples received in FBKS, ANCH staff will verify all criteria are reviewed. | | <input checked="" type="radio"/> N/A SRF Initiated by: <input checked="" type="radio"/> N/A |
| Do samples match COC (i.e., sample IDs, dates/times collected)? Are analyses requested unambiguous? | <input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A | |
| Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): <input checked="" type="checkbox"/> Bubble wrap Separate plastic bags Vermiculite Other: | <input checked="" type="radio"/> Yes No N/A | |
| Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB? | Yes No <input checked="" type="radio"/> N/A <input checked="" type="radio"/> Yes No N/A | |
| Were proper containers (type/mass/volume/preservative) used? Were the bottles provided by SGS? (Note apparent exceptions.) Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? | <input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A | |
| For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F066) for documentation.</i> | Yes No <input checked="" type="radio"/> N/A Yes No <input checked="" type="radio"/> N/A | |
| For RUSH or SHORT HOLD TIME samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified? | <input checked="" type="radio"/> Yes No N/A | |
| For client requested, site-specific QC (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly? | Yes No <input checked="" type="radio"/> N/A | |
| For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? | Yes No <input checked="" type="radio"/> N/A | |
| Was PEER REVIEW of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, each container had a unique container ID)? Was the WO# recorded in Front Counter/Sample Receiving log? | <input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A | SRF Completed by: <i>SP</i> Bottle Sheet by: <i>LP</i> Peer Reviewed by: <i>J</i> |
| For any questions answered "NO," was the PM notified? | Yes No <input checked="" type="radio"/> N/A | PM = <input checked="" type="radio"/> N/A |
| Additional notes (if applicable): 15 disposable jars came with samples Due 7/6/10 - 3 day Rush | | |

| WO# (7 digits) | Sample # | Sample # | Container ID | Container ID | Matrix | QC | Preservative (CHECKED) | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|----------|----------|--------------|--------------|------------|------------|------------------------|----------------------|--|
| | | | | | | | | TEST GROUP | |
| SAMPLE ID | | | TYPE | | CONTAINERS | | ANALYSIS | Type comments below: | |
| 1103191 | 001 | 005 | A | A | 2 Soil | | N/A | S_Weigh_Out | |
| 1103191 | 001 | 005 | B | B | 2 Soil | | MeOH+BFB * | S_GRO/VOC | |
| 1103191 | 006 | 006 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GRO/VOC | |
| | | | | | | | | | |

RUSH

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 20, 2010

Laboratory Report Date: July 14, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103191

ADEC File Number: Chulitna (Unknown); Cantwell 150.26.033; Healy 150.26.034
(NOTE: *NA* = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA / Yes / No

Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? **NA** / **Yes** / **No**

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / **No**

Comments: *Condition of samples was noted to be acceptable.*

- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **NA** / **Yes** / **No**

Comments: *No discrepancies were noted.*

- e. Data quality or usability affected? Explain. **NA**

Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / **No**

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? **None Noted** / **Yes**

Comments: *For surrogate recovery discrepancies see section 6.c.; for MS/MSD and LCS discrepancies see section 6.b; for trip blank contamination see 6.d. The SVOC PQLs are elevated in project Sample 2BIS2; the CCV/ICV recoveries of multiple VOCs are outside QC criteria.*

- c. Were corrective actions documented? **None Noted** / **Yes**

Comments: *Project Sample 2B2S3 was re-extracted following a biased low surrogate recovery.*

- d. What is the effect on data quality/usability, according to the case narrative? **NA**

Comments: *The analytes associated with ICV/CCV recovery discrepancies were not detected in associated project samples above the respective PQLs.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / **No**

Comments:

- b. All applicable holding times met? **Yes** / **No**

Comments:

- c. All soils reported on a dry-weight basis? **NA** / **Yes** / **No**

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No**

Comments: *The PQLs for multiple VOCs and SVOCs are greater than the respective cleanup levels.*

- e. Data quality or usability affected? Explain. **NA**

Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes / No**

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA / Yes / No**

Comments:

If so, are the data flags clearly defined? **NA / Yes / No**

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) **NA / Yes / No**

Comments: *LCS only. MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **NA / Yes / No**

Comments:

- iii.** Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) Yes / **No**
Comments: *The MS/MSD recoveries of multiple VOCs and SVOCs are outside QC criteria. The case narrative states that several LCS recoveries of SVOCs and the LCS recovery of one VOC are biased high; however the LCS recovery results listed in the laboratory report are within QC limits.*
- iv.** Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes** / No
Comments: *MS/MSD does not meet RPD criteria for multiple VOC and SVOC compounds.*
- v.** If %R or RPD is outside of acceptable limits, what samples are affected? NA
Comments: *The data is considered acceptable based on not detected subject analytes in the project samples.*
- vi.** Do the affected samples(s) have data flags? **NA** / Yes / No
Comments:

If so, are the data flags clearly defined? **NA** / Yes / No
Comments:
- vii.** Data quality or usability affected? Explain. NA
Comments: *The case narrative states to refer to the LCS for accuracy; the LCS recovery of analytes with MS/MSD recovery discrepancies are within QC limits; the accuracy of the project samples is considered sufficient. The analytes with RPD discrepancies to which the case narrative refers are not present in concentrations above the PQLs in the project samples.*

c. Surrogates - Organics Only

- i.** Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? NA / **Yes** / No
Comments:
- ii.** Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) NA / Yes / **No**
Comments: *Two SVOC surrogate recoveries in project Sample 2B2S3 are biased low. A MS SVOC surrogate recovery is biased low.*

- iii. Do the sample results with failed surrogate recoveries have data flags? NA / Yes / **No**

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- iv. Data quality or usability affected? Explain. NA

Comments: *The LCS SVOC recoveries are within QC limits. Project Sample B2S3 results are considered to be usable.*

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

- i. One trip blank reported per matrix, analysis and cooler? NA / **Yes** / No

Comments:

- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? NA / **Yes** / No (if no explain):

- iii. All results less than PQL? NA / Yes / **No**

Comments: *1,2,4-Trimethylbenzene was detected in the TB at concentrations greater than the respective PQL.*

- iv. If above PQL, what samples are affected? NA

Comments: *1,2,4-Trimethylbenzene was not detected above the PQL in some of the project samples that were present in the same cooler.*

- v. Data quality or usability affected? Explain. NA

Comments: *The analyte detected in the TB was either not detected, or detected in the project samples at a concentration greater than 10 times the TB detection. The project sample results are considered usable.*

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes / No

Comments: *A field duplicate for this project is included with a separate work order.*

- ii. Were the field duplicates submitted blind to the lab? **NA** / Yes / No

Comments:

- iii. Precision – All relative percent differences (RPDs) less than specified DQOs?

(Recommended: 30% for water, 50% for soil) **NA** / Yes / No

Comments:

- iv. Data quality or usability affected? Explain. **NA**

Comments:

- f. Decontamination or Equipment Blank** (if not applicable, a comment stating why must be entered below)

NA / Yes / No

Comments: An EB was not included in the scope for this project.

- i.** All results less than PQL? **NA** / Yes / No

Comments:

- ii.** If results are above PQL, what samples are affected? **NA**

Comments:

- iii.** Data quality or usability affected? Explain. **NA**

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

- a.** Are they defined and appropriate? NA / **Yes** / No

Comments: Data flags/qualifiers are defined on page following case narrative.



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 32-1-17368 ADOTRPF COLDFOOT
Client: Shannon & Wilson-Fairbanks
SGS Work Order: 1103918

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.



CASE NARRATIVE

Print Date: 7/13/2010

Client Name: Shannon & Wilson-Fairbanks
Project Name: 32-1-17368 ADOTRPF COLDFOOT
Workorder No.: 1103918

Sample Comments

Refer to the sample receipt form for information on sample condition.

| <u>Lab Sample ID</u> | <u>Sample Type</u> | <u>Client Sample ID</u> |
|----------------------|---|--------------------------------|
| 971434 | * MSD | 1103096009D(971432MSD) |
| | 8260B - MSD recovery for 1,1-dichloroethene and toluene does not meet QC criteria (biased high). Refer to LCS for accuracy. | |
| 971440 | * CCV | CCV for HBN 486880 [VMS/11345] |
| | 8260B - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples. | |
| | 8260B - CCV recovery for dichlorodifluoromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples. | |
| 972388 | * MS | 17368-2B1S2(1103191001MS) |
| | 8270D - MS recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy. | |
| 972389 | * MSD | 17368-2B1S2(1103191001MSD) |
| | 8270D - MSD recovery for multiple analytes is outside of QC criteria. Refer to LCS for accuracy. | |
| | 8270D - MS/MSD RPD for multiple analytes does not meet QC criteria. These analytes were not detected above the LOQ in the parent sample. | |

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.



Laboratory Analytical Report

Client: **Shannon & Wilson-Fairbanks**
2055 Hill Road
Fairbanks, AK 997095244

Attn: **Andrea Carlson**
T: (907)479-0600 F:(907)479-5691
ac@shanwil.com

Project: **32-1-17368 ADOTRPF COLDFOOT**

Workorder No.: **1103918**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Carmon Beene

Project Manager

Contents (Bookmarked in PDF):

- Cover Page
- Glossary
- Sample Summary Forms
- Case Narrative
- Sample Results Forms
- Batch Summary Forms (by method)
- Quality Control Summary Forms (by method)
- Chain of Custody/Sample Receipt Forms
- Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

| | |
|--------|--|
| * | The analyte has exceeded allowable regulatory or control limits. |
| ! | Surrogate out of control limits. |
| B | Indicates the analyte is found in a blank associated with the sample. |
| CCV | Continuing Calibration Verification |
| CL | Control Limit |
| D | The analyte concentration is the result of a dilution. |
| DF | Dilution Factor |
| DL | Detection Limit (i.e., maximum method detection limit) |
| E | The analyte result is above the calibrated range. |
| F | Indicates value that is greater than or equal to the DL |
| GT | Greater Than |
| ICV | Initial Calibration Verification |
| J | The quantitation is an estimation. |
| JL | The analyte was positively identified, but the quantitation is a low estimation. |
| LCS(D) | Laboratory Control Spike (Duplicate) |
| LOD | Limit of Detection (i.e., 2xDL) |
| LOQ | Limit of Quantitation (i.e., reporting or practical quantitation limit) |
| LT | Less Than |
| M | A matrix effect was present. |
| MB | Method Blank |
| MS(D) | Matrix Spike (Duplicate) |
| ND | Indicates the analyte is not detected. |
| Q | QC parameter out of acceptance range. |
| R | Rejected |
| RL | Reporting Limit |
| RPD | Relative Percent Difference |
| U | Indicates the analyte was analyzed for but not detected. |

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



SAMPLE SUMMARY

Print Date: 7/13/2010 5:14 pm

Client Name: Shannon & Wilson-Fairbanks
Project Name: 32-1-17368 ADOTRPF COLDFOOT
Workorder No.: 1103918

Analytical Methods

| <u>Method Description</u> | <u>Analytical Method</u> |
|--|--------------------------|
| Metals by ICP-MS (S) | SW6020 |
| Percent Solids SM2540G | SM20 2540G |
| SW846 8270 Semi-Volatiles by GC/MS (S) | SW8270D |
| VOC 8260 (S) Field Extracted | SW8260B |

Sample ID Cross Reference

| <u>Lab Sample ID</u> | <u>Client Sample ID</u> |
|----------------------|-------------------------|
| 1103918001 | 7368-062910-CF |
| 1103918002 | TRIP BLANK |



Detectable Results Summary

Print Date: 7/13/2010 5:14 pm

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 4.40 | mg/Kg |
| Chromium | 12.1 | mg/Kg |
| Lead | 5.96 | mg/Kg |



Shannon & Wilson-Fairbanks

Print Date: 7/13/2010 5:14 pm

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Arsenic | 4.40 | 1.09 | mg/Kg | 10 | MMS6508 | MXX23173 | |
| Cadmium | 0.217 U | 0.217 | mg/Kg | 10 | MMS6508 | MXX23173 | |
| Chromium | 12.1 | 0.435 | mg/Kg | 10 | MMS6508 | MXX23173 | |
| Lead | 5.96 | 0.217 | mg/Kg | 10 | MMS6508 | MXX23173 | |

Batch Information

Analytical Batch: MMS6508

Analytical Method: SW6020

Analysis Date/Time: 07/06/10 12:28

Dilution Factor: 10

Prep Batch: MXX23173

Prep Method: SW3050B

Prep Date/Time: 07/02/10 17:35

Initial Prep Wt./Vol.: 1.059 g

Prep Extract Vol.: 50 mL

Container ID:1103918001-A

Analyst: KDC

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1,1-Trichloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1,2,2-Tetrachloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1,2-Trichloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloroethene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloropropene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2,3-Trichlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2,3-Trichloropropane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2,4-Trichlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2,4-Trimethylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dibromo-3-chloropropane | 0.0914 U | 0.0914 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dibromoethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloroethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloropropane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,3,5-Trimethylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,3-Dichlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,3-Dichloropropane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 1,4-Dichlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 2,2-Dichloropropane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 2-Butanone (MEK) | 0.229 U | 0.229 | mg/Kg | 1 | VMS11345 | | |
| 2-Chlorotoluene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 2-Hexanone | 0.229 U | 0.229 | mg/Kg | 1 | VMS11345 | | |
| 4-Chlorotoluene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 4-Isopropyltoluene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.229 U | 0.229 | mg/Kg | 1 | VMS11345 | | |
| Benzene | 0.0114 U | 0.0114 | mg/Kg | 1 | VMS11345 | | |
| Bromobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Bromochloromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Bromodichloromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Bromoform | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Bromomethane | 0.183 U | 0.183 | mg/Kg | 1 | VMS11345 | | |
| Carbon disulfide | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Carbon tetrachloride | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Chlorobenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| Chloroethane | 0.183 U | 0.183 | mg/Kg | 1 | VMS11345 | | |
| Chloroform | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Chloromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| cis-1,2-Dichloroethene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| cis-1,3-Dichloropropene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Dibromochloromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Dibromomethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Dichlorodifluoromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Ethylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Hexachlorobutadiene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Isopropylbenzene (Cumene) | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Methylene chloride | 0.0914 U | 0.0914 | mg/Kg | 1 | VMS11345 | | |
| Methyl-t-butyl ether | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Naphthalene | 0.0457 U | 0.0457 | mg/Kg | 1 | VMS11345 | | |
| n-Butylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| n-Propylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| o-Xylene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| P & M -Xylene | 0.0457 U | 0.0457 | mg/Kg | 1 | VMS11345 | | |
| sec-Butylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Styrene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| tert-Butylbenzene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Tetrachloroethene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Toluene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| trans-1,2-Dichloroethene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| trans-1,3-Dichloropropene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Trichloroethene | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Trichlorofluoromethane | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Vinyl chloride | 0.0229 U | 0.0229 | mg/Kg | 1 | VMS11345 | | |
| Xylenes (total) | 0.0686 U | 0.0686 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloroethane-D4 <sur> | 102 | 69-132 | % | 1 | VMS11345 | | |
| 4-Bromofluorobenzene <sur> | 109 | 65-144 | % | 1 | VMS11345 | | |
| Toluene-d8 <sur> | 112 | 84-124 | % | 1 | VMS11345 | | |



Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-----------------------------|--------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11345 | | | | | | Initial Prep Wt./Vol.: 93.92 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/05/10 07:32 | | | | | | Container ID:1103918001-C | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,2,4-Trichlorobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 1,2-Dichlorobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 1,3-Dichlorobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 1,4-Dichlorobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4,5-Trichlorophenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4,6-Trichlorophenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4-Dichlorophenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4-Dimethylphenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4-Dinitrophenol | 3.43 U | 3.43 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4-Dinitrotoluene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,6-Dinitrotoluene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Chloronaphthalene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Chlorophenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Methyl-4,6-dinitrophenol | 2.29 U | 2.29 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Methylnaphthalene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Methylphenol (o-Cresol) | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Nitroaniline | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2-Nitrophenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 3&4-Methylphenol (p&m-Cresol) | 1.14 U | 1.14 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 3,3-Dichlorobenzidine | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 3-Nitroaniline | 0.572 U | 0.572 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Bromophenyl-phenylether | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Chloro-3-methylphenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Chloroaniline | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Chlorophenyl-phenylether | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Nitroaniline | 3.43 U | 3.43 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 4-Nitrophenol | 1.14 U | 1.14 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Acenaphthene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Acenaphthylene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Aniline | 2.29 U | 2.29 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Anthracene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Azobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzo(a)Anthracene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzo[a]pyrene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzo[b]Fluoranthene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzo[g,h,i]perylene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical</u> <u>Batch</u> | <u>Prep</u> <u>Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-----------------------------------|-----------------------------|-------------------|
| Benzo[k]fluoranthene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzoic acid | 1.72 U | 1.72 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Benzyl alcohol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Bis(2chloro1methylethyl)Ether | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Bis(2-Chloroethoxy)methane | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Bis(2-Chloroethyl)ether | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| bis(2-Ethylhexyl)phthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Butylbenzylphthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Chrysene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Dibenzo[a,h]anthracene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Dibenzofuran | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Diethylphthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Dimethylphthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Di-n-butylphthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| di-n-Octylphthalate | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Fluoranthene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Fluorene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Hexachlorobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Hexachlorobutadiene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Hexachlorocyclopentadiene | 0.801 U | 0.801 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Hexachloroethane | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Indeno[1,2,3-c,d] pyrene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Isophorone | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Naphthalene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Nitrobenzene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| N-Nitrosodimethylamine | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| N-Nitroso-di-n-propylamine | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| N-Nitrosodiphenylamine | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Pentachlorophenol | 2.29 U | 2.29 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Phenanthrene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Phenol | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| Pyrene | 0.286 U | 0.286 | mg/Kg | 1 | XMS5510 | XXX23007 | |
| 2,4,6-Tribromophenol <surr> | 79.9 | 47-125 | % | 1 | XMS5510 | XXX23007 | |
| 2-Fluorobiphenyl <surr> | 77.3 | 45-105 | % | 1 | XMS5510 | XXX23007 | |
| 2-Fluorophenol <surr> | 69.4 | 41-84 | % | 1 | XMS5510 | XXX23007 | |
| Nitrobenzene-d5 <surr> | 65.3 | 37-100 | % | 1 | XMS5510 | XXX23007 | |
| Phenol-d6 <surr> | 69.1 | 48-94 | % | 1 | XMS5510 | XXX23007 | |



Shannon & Wilson-Fairbanks

Print Date: 7/13/2010 5:14 pm

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|---------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Terphenyl-d14 <sur> | 97.1 | 50-120 | % | 1 | XMS5510 | XXX23007 | |

Batch Information

Analytical Batch: XMS5510

Analytical Method: SW8270D

Analysis Date/Time: 07/11/10 17:45

Dilution Factor: 1

Prep Batch: XXX23007

Prep Method: SW3550C

Prep Date/Time: 07/09/10 12:00

Initial Prep Wt./Vol.: 22.639 g

Prep Extract Vol.: 1 mL

Container ID:1103918001-A

Analyst: JDH



Shannon & Wilson-Fairbanks

Print Date: 7/13/2010 5:14 pm

Client Sample ID: **7368-062910-CF**

SGS Ref. #: 1103918001

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Percent Solids: 86.9

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Solids

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Total Solids | 86.9 | | % | 1 | SPT8173 | | |

Batch Information

Analytical Batch: SPT8173

Analytical Method: SM20 2540G

Analysis Date/Time: 07/01/10 19:45

Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:

Analyst: AHJ

Client Sample ID: **TRIP BLANK**

SGS Ref. #: 1103918002

Project ID: 32-1-17368 ADOTRPF COLDFOOT

Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/29/10 08:05

Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1,1-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1,2,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1,2-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,1-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2,3-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2,3-Trichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2,4-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2,4-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dibromo-3-chloropropane | 0.101 U | 0.101 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dibromoethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,3,5-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,3-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,3-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 1,4-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 2,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 2-Butanone (MEK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11345 | | |
| 2-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 2-Hexanone | 0.251 U | 0.251 | mg/Kg | 1 | VMS11345 | | |
| 4-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 4-Isopropyltoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11345 | | |
| Benzene | 0.0126 U | 0.0126 | mg/Kg | 1 | VMS11345 | | |
| Bromobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Bromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Bromodichloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Bromoform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Bromomethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11345 | | |
| Carbon disulfide | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Carbon tetrachloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Chlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |



Client Sample ID: **TRIP BLANK**
SGS Ref. #: 1103918002
Project ID: 32-1-17368 ADOTRPF COLDFOOT
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/29/10 08:05
Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Chloroethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11345 | | |
| Chloroform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Chloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| cis-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| cis-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Dibromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Dibromomethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Dichlorodifluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Ethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Hexachlorobutadiene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Isopropylbenzene (Cumene) | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Methylene chloride | 0.101 U | 0.101 | mg/Kg | 1 | VMS11345 | | |
| Methyl-t-butyl ether | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Naphthalene | 0.0503 U | 0.0503 | mg/Kg | 1 | VMS11345 | | |
| n-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| n-Propylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| o-Xylene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| P & M -Xylene | 0.0503 U | 0.0503 | mg/Kg | 1 | VMS11345 | | |
| sec-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Styrene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| tert-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Tetrachloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Toluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| trans-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| trans-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Trichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Trichlorofluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Vinyl chloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11345 | | |
| Xylenes (total) | 0.0754 U | 0.0754 | mg/Kg | 1 | VMS11345 | | |
| 1,2-Dichloroethane-D4 <sur> | 99.3 | 69-132 | % | 1 | VMS11345 | | |
| 4-Bromofluorobenzene <sur> | 94.9 | 65-144 | % | 1 | VMS11345 | | |
| Toluene-d8 <sur> | 107 | 84-124 | % | 1 | VMS11345 | | |



Client Sample ID: **TRIP BLANK**
SGS Ref. #: 1103918002
Project ID: 32-1-17368 ADOTRPF COLDFOOT
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/29/10 08:05
Receipt Date/Time: 07/01/10 09:15

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11345 | | | | | | Initial Prep Wt./Vol.: 49.728 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/05/10 00:47 | | | | | | Container ID:1103918002-A | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |



SGS Ref.# 970868 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch
Method
Date

QC results affect the following production samples:
1103918001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 07/01/10 |
| Batch | SPT8173 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 971126 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

QC results affect the following production samples:

1103918001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/06/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/06/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/06/10 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971430 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch
Method
Date

QC results affect the following production samples:
1103918001, 1103918002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971430 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch
Method
Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|---|-----------|--------|---------|-------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1,1-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1,2,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1,2-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,1-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2,3-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2,3-Trichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2,4-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2,4-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2-Dibromo-3-chloropropane | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/04/10 |
| 1,2-Dibromoethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,3,5-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,3-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,3-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 1,4-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 2,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 2-Butanone (MEK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/04/10 |
| 2-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 2-Hexanone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/04/10 |
| 4-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 4-Isopropyltoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| 4-Methyl-2-pentanone (MIBK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/04/10 |
| Benzene | 0.00780 U | 0.0125 | 0.00390 | mg/Kg | 07/04/10 |
| Bromobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Bromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Bromodichloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Bromoform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Bromomethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/04/10 |
| Carbon disulfide | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Carbon tetrachloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Chlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Chloroethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/04/10 |
| Chloroform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Chloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |



SGS Ref.# 971430 **Method** Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep **Batch**
Method
Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|----------|--------|---------|-------|----------|
| cis-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| cis-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Dibromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Dibromomethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Dichlorodifluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Ethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Hexachlorobutadiene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Isopropylbenzene (Cumene) | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Methylene chloride | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/04/10 |
| Methyl-t-butyl ether | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Naphthalene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/04/10 |
| n-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| n-Propylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| o-Xylene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| P & M -Xylene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/04/10 |
| sec-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Styrene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| tert-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Tetrachloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Toluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| trans-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| trans-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Trichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Trichlorofluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Vinyl chloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/04/10 |
| Xylenes (total) | 0.0470 U | 0.0750 | 0.0235 | mg/Kg | 07/04/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 101 | 69-132 | | % | 07/04/10 |
| 4-Bromofluorobenzene <surr> | 95.5 | 65-144 | | % | 07/04/10 |
| Toluene-d8 <surr> | 111 | 84-124 | | % | 07/04/10 |

Batch VMS11345
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

QC results affect the following production samples:

1103918001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|--|---------|--------|--------|-------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | |
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/10/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/10/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/10/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/10/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|-------------------------------|---------|-------|--------|-------|----------|
| Bis(2chloro1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/10/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/10/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/10/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 89.7 | 47-125 | | % | 07/10/10 |
| 2-Fluorobiphenyl <surr> | 78.6 | 45-105 | | % | 07/10/10 |
| 2-Fluorophenol <surr> | 75.6 | 41-84 | | % | 07/10/10 |
| Nitrobenzene-d5 <surr> | 70.7 | 37-100 | | % | 07/10/10 |
| Phenol-d6 <surr> | 74.2 | 48-94 | | % | 07/10/10 |
| Terphenyl-d14 <surr> | 108 | 50-120 | | % | 07/10/10 |



SGS Ref.# 972382 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

Batch XMS5509
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 970869 Duplicate
Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Original 1103180004
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/13/2010 17:14
Prep Batch
Method
Date

QC results affect the following production samples:

1103918001

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|--------------|------------|------|---|---|--------|------------|
| Total Solids | 84.9 | 83.4 | % | 2 | (< 15) | 07/01/2010 |
| Batch | SPT8173 | | | | | |
| Method | SM20 2540G | | | | | |
| Instrument | | | | | | |



SGS Ref.# 971127 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Prep Batch MXX23173
Method SW3050B
Date 07/02/2010

QC results affect the following production samples:

1103918001

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------|-----------------|------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | |
| Arsenic | LCS | 48.6 | 97 | (80-120) | | 50 mg/Kg | 07/06/2010 |
| Cadmium | LCS | 4.72 | 94 | (80-120) | | 5 mg/Kg | 07/06/2010 |
| Chromium | LCS | 18.9 | 95 | (80-120) | | 20 mg/Kg | 07/06/2010 |
| Lead | LCS | 47.1 | 94 | (80-120) | | 50 mg/Kg | 07/06/2010 |

Batch MMS6508
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Prep Batch
Method
Date

QC results affect the following production samples:

1103918001, 1103918002

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep Batch
 Method Date

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 0.830 | 111 | (77-123) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | LCS | 0.786 | 105 | (77-129) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 0.769 | 102 | (80-122) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | LCS | 0.717 | 96 | (85-121) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1-Dichloroethane | LCS | 0.786 | 105 | (81-126) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1-Dichloroethene | LCS | 0.843 | 112 | (75-125) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,1-Dichloropropene | LCS | 0.773 | 103 | (76-134) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | LCS | 0.764 | 102 | (78-124) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | LCS | 0.678 | 90 | (77-125) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | LCS | 0.814 | 109 | (77-126) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | LCS | 0.759 | 101 | (85-121) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 0.742 | 99 | (60-135) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2-Dibromoethane | LCS | 0.789 | 105 | (85-124) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | LCS | 0.760 | 101 | (88-113) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2-Dichloroethane | LCS | 0.728 | 97 | (83-121) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,2-Dichloropropane | LCS | 0.769 | 103 | (81-120) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | LCS | 0.737 | 98 | (87-120) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | LCS | 0.748 | 100 | (86-117) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,3-Dichloropropane | LCS | 0.822 | 110 | (84-123) | | | 0.750 mg/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | LCS | 0.779 | 104 | (86-118) | | | 0.750 mg/Kg | 07/04/2010 |
| 2,2-Dichloropropane | LCS | 0.786 | 105 | (69-132) | | | 0.750 mg/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/13/2010 17:15
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|-----------------------------|-----|-------|-----|------------|--|-------------|------------|
| 2-Butanone (MEK) | LCS | 1.94 | 86 | (57-135) | | 2.25 mg/Kg | 07/04/2010 |
| 2-Chlorotoluene | LCS | 0.739 | 99 | (81-122) | | 0.750 mg/Kg | 07/04/2010 |
| 2-Hexanone | LCS | 2.17 | 96 | (58-145) | | 2.25 mg/Kg | 07/04/2010 |
| 4-Chlorotoluene | LCS | 0.765 | 102 | (84-120) | | 0.750 mg/Kg | 07/04/2010 |
| 4-Isopropyltoluene | LCS | 0.780 | 104 | (83-121) | | 0.750 mg/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2.55 | 114 | (67-135) | | 2.25 mg/Kg | 07/04/2010 |
| Benzene | LCS | 0.753 | 100 | (81-124) | | 0.750 mg/Kg | 07/04/2010 |
| Bromobenzene | LCS | 0.768 | 102 | (86-119) | | 0.750 mg/Kg | 07/04/2010 |
| Bromochloromethane | LCS | 0.796 | 106 | (79-125) | | 0.750 mg/Kg | 07/04/2010 |
| Bromodichloromethane | LCS | 0.769 | 103 | (81-127) | | 0.750 mg/Kg | 07/04/2010 |
| Bromoform | LCS | 0.795 | 106 | (72-135) | | 0.750 mg/Kg | 07/04/2010 |
| Bromomethane | LCS | 0.726 | 97 | (49-141) | | 0.750 mg/Kg | 07/04/2010 |
| Carbon disulfide | LCS | 1.21 | 107 | (58-155) | | 1.13 mg/Kg | 07/04/2010 |
| Carbon tetrachloride | LCS | 0.763 | 102 | (79-128) | | 0.750 mg/Kg | 07/04/2010 |
| Chlorobenzene | LCS | 0.794 | 106 | (84-121) | | 0.750 mg/Kg | 07/04/2010 |
| Chloroethane | LCS | 0.745 | 99 | (51-141) | | 0.750 mg/Kg | 07/04/2010 |
| Chloroform | LCS | 0.769 | 103 | (77-124) | | 0.750 mg/Kg | 07/04/2010 |
| Chloromethane | LCS | 0.836 | 111 | (54-129) | | 0.750 mg/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | LCS | 0.771 | 103 | (82-124) | | 0.750 mg/Kg | 07/04/2010 |
| cis-1,3-Dichloropropene | LCS | 0.791 | 105 | (82-122) | | 0.750 mg/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep Batch
 Method Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| Dibromochloromethane | LCS | 0.800 | 107 | (84-125) | | 0.750 mg/Kg | 07/04/2010 |
| Dibromomethane | LCS | 0.777 | 104 | (80-123) | | 0.750 mg/Kg | 07/04/2010 |
| Dichlorodifluoromethane | LCS | 0.910 | 121 | (43-135) | | 0.750 mg/Kg | 07/04/2010 |
| Ethylbenzene | LCS | 0.805 | 107 | (87-119) | | 0.750 mg/Kg | 07/04/2010 |
| Hexachlorobutadiene | LCS | 0.722 | 96 | (74-124) | | 0.750 mg/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | LCS | 0.828 | 110 | (89-121) | | 0.750 mg/Kg | 07/04/2010 |
| Methylene chloride | LCS | 0.738 | 98 | (63-137) | | 0.750 mg/Kg | 07/04/2010 |
| Methyl-t-butyl ether | LCS | 1.14 | 101 | (76-133) | | 1.13 mg/Kg | 07/04/2010 |
| Naphthalene | LCS | 0.710 | 95 | (73-131) | | 0.750 mg/Kg | 07/04/2010 |
| n-Butylbenzene | LCS | 0.772 | 103 | (82-127) | | 0.750 mg/Kg | 07/04/2010 |
| n-Propylbenzene | LCS | 0.736 | 98 | (82-125) | | 0.750 mg/Kg | 07/04/2010 |
| o-Xylene | LCS | 0.802 | 107 | (89-120) | | 0.750 mg/Kg | 07/04/2010 |
| P & M -Xylene | LCS | 1.66 | 111 | (88-121) | | 1.50 mg/Kg | 07/04/2010 |
| sec-Butylbenzene | LCS | 0.747 | 100 | (84-122) | | 0.750 mg/Kg | 07/04/2010 |
| Styrene | LCS | 0.794 | 106 | (91-120) | | 0.750 mg/Kg | 07/04/2010 |
| tert-Butylbenzene | LCS | 0.724 | 97 | (82-122) | | 0.750 mg/Kg | 07/04/2010 |
| Tetrachloroethene | LCS | 0.745 | 99 | (82-125) | | 0.750 mg/Kg | 07/04/2010 |
| Toluene | LCS | 0.846 | 113 | (87-119) | | 0.750 mg/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | LCS | 0.785 | 105 | (79-125) | | 0.750 mg/Kg | 07/04/2010 |
| trans-1,3-Dichloropropene | LCS | 0.821 | 109 | (86-122) | | 0.750 mg/Kg | 07/04/2010 |
| Trichloroethene | LCS | 0.798 | 106 | (77-124) | | 0.750 mg/Kg | 07/04/2010 |



SGS Ref.# 971431 Lab Control Sample

Printed Date/Time 07/13/2010 17:15
 Prep Batch

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Method
 Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-------|----|------------|--|-------------|------------|
| Trichlorofluoromethane | LCS | 0.728 | 97 | (64-139) | | 0.750 mg/Kg | 07/04/2010 |
|------------------------|-----|-------|----|------------|--|-------------|------------|

| | | | | | | | |
|----------------|-----|-------|-----|------------|--|-------------|------------|
| Vinyl chloride | LCS | 0.843 | 112 | (67-125) | | 0.750 mg/Kg | 07/04/2010 |
|----------------|-----|-------|-----|------------|--|-------------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2.46 | 109 | (89-120) | | 2.25 mg/Kg | 07/04/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 99 | (69-132) | | | 07/04/2010 |
|------------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 95 | (65-144) | | | 07/04/2010 |
|-----------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 109 | (84-124) | | | 07/04/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11345
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
Project Name/# 32-1-17368 ADOTRPF COLDFOOT
Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
Method SW3550C
Date 07/09/2010

QC results affect the following production samples:

1103918001

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 3.20 | 72 | (54-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | LCS | 3.15 | 71 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | LCS | 3.05 | 69 | (52-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | LCS | 3.02 | 68 | (51-92) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | LCS | 3.85 | 87 | (71-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.83 | 86 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | LCS | 3.34 | 75 | (64-107) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | LCS | 3.46 | 78 | (63-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | LCS | 6.99 | 87 | (43-130) | | | 8 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | LCS | 4.47 | 101 | (64-115) | | | 4.44 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | LCS | 4.09 | 92 | (67-110) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | LCS | 3.18 | 72 | (52-103) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | LCS | 3.22 | 72 | (56-94) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.43 | 105 | (51-131) | | | 8 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | LCS | 3.52 | 79 | (61-105) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.20 | 72 | (61-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | LCS | 4.07 | 92 | (70-120) | | | 4.44 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | LCS | 3.39 | 76 | (65-101) | | | 4.44 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.91 | 79 | (65-105) | | | 6.22 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.29 | 97 | (49-128) | | | 4.44 mg/Kg | 07/10/2010 |
| 3-Nitroaniline | LCS | 4.15 | 93 | (66-110) | | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep XXX23007
 Batch Method SW3550C
 Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 4-Bromophenyl-phenylether | LCS | 3.39 | 76 | (53-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.70 | 83 | (69-114) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | LCS | 3.24 | 73 | (58-102) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.69 | 83 | (53-110) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | LCS | 4.11 | 92 | (63-115) | | 4.44 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | LCS | 6.19 | 100 | (44-137) | | 6.22 mg/Kg | 07/10/2010 |
| Acenaphthene | LCS | 3.76 | 85 | (57-110) | | 4.44 mg/Kg | 07/10/2010 |
| Acenaphthylene | LCS | 3.79 | 85 | (56-105) | | 4.44 mg/Kg | 07/10/2010 |
| Aniline | LCS | 2.65 | 60 | (40-92) | | 4.44 mg/Kg | 07/10/2010 |
| Anthracene | LCS | 4.18 | 94 | (65-105) | | 4.44 mg/Kg | 07/10/2010 |
| Azobenzene | LCS | 4.01 | 90 | (54-120) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | LCS | 4.35 | 98 | (72-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | LCS | 4.51 | 101 | (71-110) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | LCS | 4.30 | 97 | (70-115) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | LCS | 4.72 | 106 | (52-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | LCS | 4.17 | 94 | (66-125) | | 4.44 mg/Kg | 07/10/2010 |
| Benzoic acid | LCS | 3.42 | 55 | (25-76) | | 6.22 mg/Kg | 07/10/2010 |
| Benzyl alcohol | LCS | 3.43 | 77 | (61-110) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 3.20 | 72 | (50-97) | | 4.44 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethoxy)methane | LCS | 3.44 | 77 | (57-104) | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| Bis(2-Chloroethyl)ether | LCS | 3.09 | 70 | (49-91) | | 4.44 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.73 | 106 | (62-120) | | 4.44 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | LCS | 4.77 | 107 | (69-120) | | 4.44 mg/Kg | 07/10/2010 |
| Chrysene | LCS | 4.38 | 99 | (72-110) | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.82 | 108 | (61-125) | | 4.44 mg/Kg | 07/10/2010 |
| Dibenzofuran | LCS | 3.86 | 87 | (60-105) | | 4.44 mg/Kg | 07/10/2010 |
| Diethylphthalate | LCS | 4.29 | 97 | (50-115) | | 4.44 mg/Kg | 07/10/2010 |
| Dimethylphthalate | LCS | 4.04 | 91 | (59-110) | | 4.44 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | LCS | 4.40 | 99 | (56-110) | | 4.44 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | LCS | 4.91 | 111 | (61-123) | | 4.44 mg/Kg | 07/10/2010 |
| Fluoranthene | LCS | 4.41 | 99 | (64-115) | | 4.44 mg/Kg | 07/10/2010 |
| Fluorene | LCS | 3.89 | 88 | (64-110) | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | LCS | 4.26 | 96 | (63-120) | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | LCS | 3.60 | 81 | (57-107) | | 4.44 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | LCS | 3.81 | 86 | (35-102) | | 4.44 mg/Kg | 07/10/2010 |
| Hexachloroethane | LCS | 3.13 | 70 | (51-89) | | 4.44 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.77 | 107 | (60-120) | | 4.44 mg/Kg | 07/10/2010 |
| Isophorone | LCS | 3.52 | 79 | (57-108) | | 4.44 mg/Kg | 07/10/2010 |
| Naphthalene | LCS | 3.32 | 75 | (51-105) | | 4.44 mg/Kg | 07/10/2010 |
| Nitrobenzene | LCS | 3.45 | 78 | (53-99) | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | LCS | 3.09 | 70 | (45-90) | | 4.44 mg/Kg | 07/10/2010 |



SGS Ref.# 972384 Lab Control Sample

Printed Date/Time 07/13/2010 17:15

Client Name Shannon & Wilson-Fairbanks
 Project Name/# 32-1-17368 ADOTRPF COLDFOOT
 Matrix Soil/Solid (dry weight)

Prep Batch XXX23007
 Method SW3550C
 Date 07/09/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|----|------------|--|------------|------------|
| N-Nitroso-di-n-propylamine | LCS | 3.09 | 69 | (59-100) | | 4.44 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | LCS | 3.25 | 73 | (61-114) | | 4.44 mg/Kg | 07/10/2010 |
| Pentachlorophenol | LCS | 6.10 | 98 | (56-117) | | 6.22 mg/Kg | 07/10/2010 |
| Phenanthrene | LCS | 4.17 | 94 | (63-110) | | 4.44 mg/Kg | 07/10/2010 |
| Phenol | LCS | 3.27 | 74 | (56-97) | | 4.44 mg/Kg | 07/10/2010 |
| Pyrene | LCS | 4.25 | 96 | (70-123) | | 4.44 mg/Kg | 07/10/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|-----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 96 | (47-125) | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 83 | (45-105) | | | 07/10/2010 |
| 2-Fluorophenol <surr> | LCS | | 72 | (41-84) | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 78 | (37-100) | | | 07/10/2010 |
| Phenol-d6 <surr> | LCS | | 75 | (48-94) | | | 07/10/2010 |
| Terphenyl-d14 <surr> | LCS | | 101 | (50-120) | | | 07/10/2010 |

Batch XMS5509
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 971128 Matrix Spike
 971129 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch MXX23173
 Method Soils/Solids Digest for Metals b
 Date 07/02/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103918001

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------------------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | MS | 9.95 | 59.9 | 98 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 61.9 | 98 | | 3 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Cadmium | MS | 0.250 | 4.99 | 93 | (80-120) | | | 5.08 mg/Kg | 07/06/2010 |
| | MSD | | 5.28 | 95 | | 6 | (< 20) | 5.30 mg/Kg | 07/06/2010 |
| Chromium | MS | 37.3 | 59.7 | 110 | (80-120) | | | 20.3 mg/Kg | 07/06/2010 |
| | MSD | | 57.2 | 94 | | 4 | (< 20) | 21.2 mg/Kg | 07/06/2010 |
| Lead | MS | 7.16 | 52.6 | 89 | (80-120) | | | 50.8 mg/Kg | 07/06/2010 |
| | MSD | | 54.6 | 90 | | 4 | (< 20) | 53.0 mg/Kg | 07/06/2010 |
| Batch | MMS6508 | | | | | | | | |
| Method | SW6020 | | | | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | | | | |



SGS Ref.# 971433 Matrix Spike
971434 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
Prep Batch
Method
Date

Original 971432
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:

1103918001, 1103918002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|------------|------|------|------------|---|---------|------------|------------|
| 1,1,1,2-Tetrachloroethane | MS | (0.0306) U | 1.62 | 110 | (77-123) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.71 | 117 | | 6 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1,1-Trichloroethane | MS | (0.0306) U | 1.62 | 110 | (77-129) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.68 | 114 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (0.0306) U | 1.53 | 104 | (80-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.56 | 106 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1,2-Trichloroethane | MS | (0.0306) U | 1.54 | 105 | (85-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.54 | 105 | | 0 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1-Dichloroethane | MS | (0.0306) U | 1.55 | 106 | (81-126) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.61 | 110 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1-Dichloroethene | MS | (0.0306) U | 1.81 | 123 | (75-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.86 | 127* | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,1-Dichloropropene | MS | (0.0306) U | 1.57 | 107 | (76-134) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.70 | 116 | | 8 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2,3-Trichlorobenzene | MS | (0.0306) U | 1.58 | 108 | (78-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.60 | 109 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2,3-Trichloropropane | MS | (0.0306) U | 1.47 | 100 | (77-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.55 | 106 | | 6 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2,4-Trichlorobenzene | MS | (0.0306) U | 1.55 | 105 | (77-126) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.69 | 115 | | 9 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2,4-Trimethylbenzene | MS | (0.0306) U | 1.55 | 105 | (85-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.51 | 103 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (0.122) U | 1.40 | 95 | (60-135) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.42 | 97 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2-Dibromoethane | MS | (0.0306) U | 1.69 | 115 | (85-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.64 | 112 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2-Dichlorobenzene | MS | (0.0306) U | 1.57 | 107 | (88-113) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.64 | 112 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2-Dichloroethane | MS | (0.0306) U | 1.49 | 102 | (83-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.55 | 106 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,2-Dichloropropane | MS | (0.0306) U | 1.56 | 106 | (81-120) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.62 | 110 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,3,5-Trimethylbenzene | MS | (0.0306) U | 1.52 | 104 | (87-120) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.58 | 108 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,3-Dichlorobenzene | MS | (0.0306) U | 1.46 | 100 | (86-117) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.55 | 106 | | 6 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,3-Dichloropropane | MS | (0.0306) U | 1.65 | 113 | (84-123) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.65 | 112 | | 0 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 1,4-Dichlorobenzene | MS | (0.0306) U | 1.51 | 103 | (86-118) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.58 | 108 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|-----------------------------|-----|------------|------|-----|------------|---|---------|------------|------------|
| 2,2-Dichloropropane | MS | (0.0306) U | 1.60 | 109 | (69-132) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.71 | 116 | | 7 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 2-Butanone (MEK) | MS | (0.306) U | 4.82 | 110 | (57-135) | | | 4.40 mg/Kg | 07/04/2010 |
| | MSD | | 4.62 | 105 | | 4 | (< 20) | 4.40 mg/Kg | 07/04/2010 |
| 2-Chlorotoluene | MS | (0.0306) U | 1.50 | 102 | (81-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.53 | 104 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 2-Hexanone | MS | (0.306) U | 4.89 | 111 | (58-145) | | | 4.40 mg/Kg | 07/04/2010 |
| | MSD | | 4.80 | 109 | | 2 | (< 20) | 4.40 mg/Kg | 07/04/2010 |
| 4-Chlorotoluene | MS | (0.0306) U | 1.51 | 103 | (84-120) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.57 | 107 | | 4 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 4-Isopropyltoluene | MS | (0.0306) U | 1.49 | 102 | (83-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.59 | 109 | | 7 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (0.306) U | 5.16 | 117 | (67-135) | | | 4.40 mg/Kg | 07/04/2010 |
| | MSD | | 4.97 | 113 | | 4 | (< 20) | 4.40 mg/Kg | 07/04/2010 |
| Benzene | MS | (0.0153) U | 1.59 | 108 | (81-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.62 | 111 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Bromobenzene | MS | (0.0306) U | 1.49 | 102 | (86-119) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.54 | 105 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Bromochloromethane | MS | (0.0306) U | 1.65 | 112 | (79-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.66 | 113 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Bromodichloromethane | MS | (0.0306) U | 1.54 | 105 | (81-127) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.58 | 108 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Bromoform | MS | (0.0306) U | 1.66 | 113 | (72-135) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.70 | 116 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Bromomethane | MS | (0.244) U | 1.58 | 108 | (49-141) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.67 | 114 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Carbon disulfide | MS | (0.0306) U | 2.60 | 118 | (58-155) | | | 2.20 mg/Kg | 07/04/2010 |
| | MSD | | 2.67 | 121 | | 3 | (< 20) | 2.20 mg/Kg | 07/04/2010 |
| Carbon tetrachloride | MS | (0.0306) U | 1.53 | 104 | (79-128) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.60 | 109 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Chlorobenzene | MS | (0.0306) U | 1.63 | 111 | (84-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.61 | 110 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Chloroethane | MS | (0.244) U | 1.52 | 104 | (51-141) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.45 | 99 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Chloroform | MS | (0.0306) U | 1.56 | 106 | (77-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.58 | 108 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Chloromethane | MS | (0.0306) U | 1.51 | 103 | (54-129) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.55 | 106 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| cis-1,2-Dichloroethene | MS | (0.0306) U | 1.60 | 109 | (82-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.64 | 112 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (0.0306) U | 1.61 | 110 | (82-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.69 | 115 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Dibromochloromethane | MS | (0.0306) U | 1.62 | 111 | (84-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.61 | 110 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Dibromomethane | MS | (0.0306) U | 1.59 | 109 | (80-123) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.61 | 110 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Dichlorodifluoromethane | MS | (0.0306) U | 1.75 | 120 | (43-135) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.78 | 121 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Ethylbenzene | MS | (0.0306) U | 1.66 | 113 | (87-119) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.68 | 115 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Hexachlorobutadiene | MS | (0.0306) U | 1.56 | 106 | (74-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.58 | 108 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Isopropylbenzene (Cumene) | MS | (0.0306) U | 1.67 | 114 | (89-121) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.65 | 112 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Methylene chloride | MS | (0.122) U | 1.46 | 99 | (63-137) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.52 | 104 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Methyl-t-butyl ether | MS | (0.0306) U | 2.32 | 105 | (76-133) | | | 2.20 mg/Kg | 07/04/2010 |
| | MSD | | 2.39 | 108 | | 3 | (< 20) | 2.20 mg/Kg | 07/04/2010 |
| Naphthalene | MS | 0.0398J | 1.45 | 96 | (73-131) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.42 | 94 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| n-Butylbenzene | MS | (0.0306) U | 1.52 | 104 | (82-127) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.64 | 112 | | 8 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| n-Propylbenzene | MS | (0.0306) U | 1.54 | 105 | (82-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.52 | 104 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| o-Xylene | MS | (0.0306) U | 1.67 | 114 | (89-120) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.70 | 116 | | 2 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| P & M -Xylene | MS | (0.0588) U | 3.37 | 115 | (88-121) | | | 2.93 mg/Kg | 07/04/2010 |
| | MSD | | 3.32 | 113 | | 2 | (< 20) | 2.93 mg/Kg | 07/04/2010 |
| sec-Butylbenzene | MS | (0.0306) U | 1.51 | 103 | (84-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.56 | 106 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Styrene | MS | (0.0306) U | 1.66 | 113 | (91-120) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.66 | 113 | | 0 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| tert-Butylbenzene | MS | (0.0306) U | 1.49 | 102 | (82-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.49 | 101 | | 0 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Tetrachloroethene | MS | (0.0306) U | 1.55 | 106 | (82-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.63 | 111 | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Toluene | MS | (0.0306) U | 1.70 | 116 | (87-119) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.78 | 122* | | 5 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| trans-1,2-Dichloroethene | MS | (0.0306) U | 1.64 | 112 | (79-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.77 | 120 | | 8 | (< 20) | 1.47 mg/Kg | 07/04/2010 |



SGS Ref.# 971433 Matrix Spike
 971434 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch
 Method
 Date

Original 971432
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|------------|------|-----|------------|---|---------|------------|------------|
| trans-1,3-Dichloropropene | MS | (0.0306) U | 1.65 | 112 | (86-122) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.59 | 109 | | 3 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Trichloroethene | MS | (0.0306) U | 1.62 | 110 | (77-124) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.61 | 109 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Trichlorofluoromethane | MS | (0.0306) U | 1.47 | 101 | (64-139) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.46 | 99 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Vinyl chloride | MS | (0.0306) U | 1.64 | 112 | (67-125) | | | 1.47 mg/Kg | 07/04/2010 |
| | MSD | | 1.63 | 111 | | 1 | (< 20) | 1.47 mg/Kg | 07/04/2010 |
| Xylenes (total) | MS | (0.0922) U | 5.04 | 115 | (89-120) | | | 4.40 mg/Kg | 07/04/2010 |
| | MSD | | 5.02 | 114 | | 1 | (< 20) | 4.40 mg/Kg | 07/04/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|------|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 1.51 | 103 | (69-132) | | | | 07/04/2010 |
| | MSD | | 1.51 | 103 | | 0 | | | 07/04/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 2.20 | 72 | (65-144) | | | | 07/04/2010 |
| | MSD | | 2.30 | 75 | | 4 | | | 07/04/2010 |
| Toluene-d8 <surr> | MS | | 1.64 | 112 | (84-124) | | | | 07/04/2010 |
| | MSD | | 1.71 | 117 | | 4 | | | 07/04/2010 |

Batch VMS11345
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 972388 Matrix Spike
972389 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
Prep Batch XXX23007
Method Sonication Extraction Soil SW8
Date 07/09/2010

Original 1103191001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:

1103918001

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (5.26) U | 2.87 | 61 | (54-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,2-Dichlorobenzene | MS | (5.26) U | 2.70 | 57 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 17 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,3-Dichlorobenzene | MS | (5.26) U | 2.87 | 61 | (52-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.12 | 66 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 1,4-Dichlorobenzene | MS | (5.26) U | 2.69 | 57 | (51-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.93 | 62 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,5-Trichlorophenol | MS | (5.26) U | 2.82 | 60* | (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.13 | 66* | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4,6-Trichlorophenol | MS | (5.26) U | 2.95 | 63* | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dichlorophenol | MS | (5.26) U | 2.55 | 54* | (64-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.63 | 56* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dimethylphenol | MS | (5.26) U | 3.34 | 71 | (63-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.35 | 71 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,4-Dinitrophenol | MS | (63.2) U | 0.00 | 0* | (43-130) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2,4-Dinitrotoluene | MS | (5.26) U | 3.80 | 81 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.88 | 82 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2,6-Dinitrotoluene | MS | (5.26) U | 3.84 | 82 | (67-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.01 | 64* | | 24 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chloronaphthalene | MS | (5.26) U | 3.02 | 64 | (52-103) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.27 | 69 | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Chlorophenol | MS | (5.26) U | 2.55 | 54* | (56-94) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.75 | 58 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (42.1) U | 13.3 | 158* | (51-131) | | | 8.46 mg/Kg | 07/10/2010 |
| | MSD | | 13.3 | 156* | | 0 | (< 30) | 8.53 mg/Kg | 07/10/2010 |
| 2-Methylnaphthalene | MS | 8.67 | 11.1 | 52* | (61-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 11.4 | 59* | | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Methylphenol (o-Cresol) | MS | (5.26) U | 2.72 | 58* | (61-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.98 | 63 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitroaniline | MS | (5.26) U | 3.28 | 70* | (70-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.58 | 76 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 2-Nitrophenol | MS | (5.26) U | 3.34 | 71 | (65-101) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 3&4-Methylphenol (p&m-Cres) | MS | (21.1) U | 0.00 | 0* | (65-105) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 7.11 | 107* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| 3,3-Dichlorobenzidine | MS | (5.26) U | 2.86 | 61 | (49-128) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | 78 | | 26 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 3-Nitroaniline | MS | (10.5) U | 0.00 | | 0* (66-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Bromophenyl-phenylether | MS | (5.26) U | 2.51 | | 53 (53-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.95 | | 62 | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloro-3-methylphenol | MS | (5.26) U | 2.95 | | 63* (69-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.17 | | 67* | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chloroaniline | MS | (5.26) U | 2.09 | | 45* (58-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.45 | | 52* | 16 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Chlorophenyl-phenylether | MS | (5.26) U | 3.01 | | 64 (53-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.14 | | 66 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitroaniline | MS | (63.2) U | 0.00 | | 0* (63-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| 4-Nitrophenol | MS | (21.1) U | 0.00 | | 0* (44-137) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Acenaphthene | MS | (5.26) U | 3.60 | | 77 (57-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.95 | | 83 | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Acenaphthylene | MS | (5.26) U | 3.50 | | 75 (56-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.66 | | 77 | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Aniline | MS | (42.1) U | 0.00 | | 0* (40-92) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Anthracene | MS | (5.26) U | 3.40 | | 72 (65-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.38 | | 71 | 1 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Azobenzene | MS | (5.26) U | 3.13 | | 67 (54-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo(a)Anthracene | MS | (5.26) U | 3.34 | | 71* (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.70 | | 78 | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[a]pyrene | MS | (5.26) U | 3.43 | | 73 (71-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | | 75 | 3 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[b]Fluoranthene | MS | (5.26) U | 0.00 | | 0* (70-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | | 0* | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[g,h,i]perylene | MS | (5.26) U | 3.30 | | 70 (52-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | | 75 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzo[k]fluoranthene | MS | (5.26) U | 2.68 | | 57* (66-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.26 | | 69 | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Benzoic acid | MS | (31.6) U | 0.00 | | 0* (25-76) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 16.3 | | 246* | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Benzyl alcohol | MS | (5.26) U | 4.53 | | 96 (61-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.04 | | 106 | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2chloro1methylethyl)Ether | MS | (5.26) U | 2.88 | | 61 (50-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.09 | | 65 | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Bis(2-Chloroethoxy)methane | MS | (5.26) U | 2.74 | 58 | (57-104) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 11 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Bis(2-Chloroethyl)ether | MS | (5.26) U | 2.79 | 59 | (49-91) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| bis(2-Ethylhexyl)phthalate | MS | (5.26) U | 4.44 | 95 | (62-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.05 | 106 | | 13 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Butylbenzylphthalate | MS | (5.26) U | 3.68 | 78 | (69-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.93 | 83 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Chrysene | MS | (5.26) U | 3.40 | 72 | (72-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.61 | 76 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzo[a,h]anthracene | MS | (5.26) U | 3.23 | 69 | (61-125) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.29 | 69 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dibenzofuran | MS | (5.26) U | 3.58 | 76 | (60-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Diethylphthalate | MS | (5.26) U | 3.12 | 66 | (50-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.30 | 70 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Dimethylphthalate | MS | (5.26) U | 2.95 | 63 | (59-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.53 | 75 | | 18 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Di-n-butylphthalate | MS | (5.26) U | 3.47 | 74 | (56-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.63 | 77 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| di-n-Octylphthalate | MS | (5.26) U | 3.48 | 74 | (61-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.71 | 78 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluoranthene | MS | (5.26) U | 3.61 | 77 | (64-115) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.54 | 75 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Fluorene | MS | (5.26) U | 3.51 | 75 | (64-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.90 | 82 | | 10 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobenzene | MS | (5.26) U | 3.45 | 73 | (63-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.33 | 70 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorobutadiene | MS | (5.26) U | 3.71 | 79 | (57-107) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.49 | 74 | | 6 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachlorocyclopentadiene | MS | (14.7) U | 0.00 | 0* | (35-102) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.34 | 92 | | 0 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Hexachloroethane | MS | (5.26) U | 7.09 | 151* | (51-89) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 8.94 | 189* | | 23 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Indeno[1,2,3-c,d] pyrene | MS | (5.26) U | 3.21 | 68 | (60-120) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.45 | 73 | | 7 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Isophorone | MS | (5.26) U | 4.23 | 90 | (57-108) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.41 | 93 | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Naphthalene | MS | (5.26) U | 5.09 | 108* | (51-105) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 5.29 | 112* | | 4 | (< 30) | 4.74 mg/Kg | 07/10/2010 |



SGS Ref.# 972388 Matrix Spike
 972389 Matrix Spike Duplicate

Printed Date/Time 07/13/2010 17:15
 Prep Batch XXX23007
 Method Sonication Extraction Soil SW8
 Date 07/09/2010

Original 1103191001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Nitrobenzene | MS | (5.26) U | 2.83 | 60 | (53-99) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.19 | 67 | | 12 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodimethylamine | MS | (5.26) U | 1.92 | 41* | (45-90) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.08 | 44* | | 8 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitroso-di-n-propylamine | MS | (5.26) U | 2.41 | 51* | (59-100) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.96 | 62 | | 20 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| N-Nitrosodiphenylamine | MS | (5.26) U | 2.96 | 63 | (61-114) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.89 | 61 | | 2 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pentachlorophenol | MS | (42.1) U | 0.00 | 0* | (56-117) | | | 6.58 mg/Kg | 07/10/2010 |
| | MSD | | 0.00 | 0* | | 0 | (< 30) | 6.63 mg/Kg | 07/10/2010 |
| Phenanthrene | MS | (5.26) U | 3.70 | 79 | (63-110) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 4.06 | 86 | | 9 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Phenol | MS | (5.26) U | 2.11 | 45* | (56-97) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 2.47 | 52* | | 15 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Pyrene | MS | (5.26) U | 3.34 | 71 | (70-123) | | | 4.71 mg/Kg | 07/10/2010 |
| | MSD | | 3.50 | 74 | | 5 | (< 30) | 4.74 mg/Kg | 07/10/2010 |
| Surrogates | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | MS | | 6.52 | 69 | (47-125) | | | | 07/10/2010 |
| | MSD | | 6.37 | 67 | | 2 | | | 07/10/2010 |
| 2-Fluorobiphenyl <surr> | MS | | 3.38 | 72 | (45-105) | | | | 07/10/2010 |
| | MSD | | 3.77 | 80 | | 11 | | | 07/10/2010 |
| 2-Fluorophenol <surr> | MS | | 4.02 | 43 | (41-84) | | | | 07/10/2010 |
| | MSD | | 4.97 | 53 | | 21 | | | 07/10/2010 |
| Nitrobenzene-d5 <surr> | MS | | 2.66 | 57 | (37-100) | | | | 07/10/2010 |
| | MSD | | 2.85 | 60 | | 7 | | | 07/10/2010 |
| Phenol-d6 <surr> | MS | | 5.07 | 54 | (48-94) | | | | 07/10/2010 |
| | MSD | | 5.49 | 58 | | 8 | | | 07/10/2010 |
| Terphenyl-d14 <surr> | MS | | 3.22 | 69 | (50-120) | | | | 07/10/2010 |
| | MSD | | 3.56 | 75 | | 10 | | | 07/10/2010 |

Batch XMS5509
 Method SW8270D
 Instrument HP 6890/5973 SSA

Long, Alesha (Anchorage)

1103918



From: Beene, Carmon R (Anchorage)
Sent: Friday, July 02, 2010 1:59 PM
To: Long, Alesha (Anchorage)
Subject: FW: WO#1103918

From: Andrea Carlson [mailto:ac@shanwil.com]
Sent: Friday, July 02, 2010 11:24 AM
To: Beene, Carmon R (Anchorage)
Cc: Homestead, Charles (Anchorage)
Subject: WO#1103918

Hi Carmon,

I submitted this sample on Wednesday but didn't put RUSH on my COC for WO#1103918. I should have rushed them, and need to request that we do a 3-day RUSH on it.

It is associated with the projects I dropped off today, WO#1103930 and WO#1103929, which are also 3-day RUSH. If we could get all 3 work orders at about the same time that would be ideal.

I realize we have the holiday and the samples will likely get in the queue on Tuesday.

Thanks,

Andrea

SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

| | | |
|--|---|---|
| Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," <i>Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff (attached).</i> | Yes <input type="radio"/> <input checked="" type="radio"/> No <input type="radio"/> N/A <input type="radio"/> | Use space below for additional notes... |
|--|---|---|

| |
|--|
| |
| |
| |
| |
| |

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|---|------------------------|
| Were custody seals intact? Note # & location: | <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A | |
| COC accompanied samples? | <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: <u>1</u> @ <u>19</u> w/ Therm.ID: <u>13D</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A | |
| Delivery method: <input checked="" type="radio"/> Lynden <input type="radio"/> Other: | | |

Completed by: [Signature] 7/1/10

| WO# (7 digits) | Sample # | Sample # | Container ID | Container ID | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - <i>e.g., preservative added</i> or SPECIAL HANDLING - <i>e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc.</i> |
|----------------|----------|----------|--------------|--------------|------------|------------|------------------------|-------------|----------------------|---|
| | | | | | | | | | | |
| SAMPLE ID | | | TYPE | | CONTAINERS | | ANALYSIS | | Type comments below: | |
| 1103918 | 001 | 001 | A | A | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103918 | 001 | 001 | B | B | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103918 | 001 | 001 | C | C | 2 Soil | | MeOH+BFB * | S_GRO/VOC | | |
| 1103918 | 002 | 002 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GRO/VOC | | |
| | | | | | | | | | | |

1103918



LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 20, 2010

Laboratory Report Date: July 13, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103918

ADEC File Number: 330.26.006

(NOTE: NA = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA / **Yes** / No

Comments: *Samples were transferred from SGS-Fairbanks to SGS-Anchorage.*

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? **NA / Yes / No**
Comments:
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes / No**
Comments: *Sample condition was documented as acceptable.*
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **NA / Yes / No**
Comments: *The laboratory noted no discrepancies.*
- e. Data quality or usability affected? Explain. **NA**
Comments:

4. Case Narrative

- a. Present and understandable? **Yes / No**
Comments:
- b. Discrepancies, errors or QC failures noted by the lab? **None Noted / Yes**
Comments: *For MS/MSD discrepancies see section 6.b. The CCV/ICV recoveries of several analytes are biased high.*
- c. Were corrective actions documented? **None Noted / Yes**
Comments:
- d. What is the effect on data quality/usability, according to the case narrative? **NA**
Comments: *The analytes with CCV/ICV biased high recovery were not detected above the PQLs in associated project samples.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes / No**
Comments:
- b. All applicable holding times met? **Yes / No**
Comments:
- c. All soils reported on a dry-weight basis? **NA / Yes / No**
Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? Yes / **No**

Comments: *The PQLs for multiple VOCs and SVOCs are greater than the respective cleanup levels.*

- e. Data quality or usability affected? Explain. *NA*

Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) *NA* / **Yes** / No

Comments: *LCS only. MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? *N/A* / **Yes** / No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) Yes / **No**

Comments: *MS/MSD recoveries of several analytes are outside QC criteria.*

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes** / No

Comments: *The laboratory case narrative states that MS/MSD RPDs for several analytes do not meet QC criteria. No RPD discrepancies were listed in the laboratory report.*

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**
Comments: *The data is considered acceptable based on not detected subject analytes in the project samples.*

- vi. Do the affected samples(s) have data flags? **NA** / Yes / **No**

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- vii. Data quality or usability affected? Explain. **NA**

Comments: *The data is considered acceptable based on acceptable LCS accuracy and not detected subject analytes in the project samples.*

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **NA** / **Yes** / No

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **NA** / **Yes** / No

Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- iv. Data quality or usability affected? Explain. **NA**

Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

- i. One trip blank reported per matrix, analysis and cooler? *NA* / **Yes** / No
Comments:
- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? *NA* / **Yes** / No (if no explain):
- iii. All results less than PQL? *NA* / **Yes** / No
Comments:
- iv. If above PQL, what samples are affected? *NA*
Comments:
- v. Data quality or usability affected? Explain. *NA*
Comments:

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No
Comments: *A field duplicate for this project is included in a separate work order.*
- ii. Were the field duplicates submitted blind to the lab? *NA* / Yes / No
Comments:
- iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) *NA* / Yes / No
Comments:
- iv. Data quality or usability affected? Explain. *NA*
Comments:

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

NA / Yes / No
Comments: An EB was not included in the scope for this project.

- i. All results less than PQL? *NA* / Yes / No
Comments:
- ii. If results are above PQL, what samples are affected? *NA*
Comments:

- iii. Data quality or usability affected? Explain. **NA**
Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

- a. Are they defined and appropriate? *NA* / **Yes** / *No*
Comments: *Data flags/qualifiers are defined on page following case narrative.*



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: ADOT&PF Inj. Wells
Client: Shannon & Wilson-Fairbanks
SGS Work Order: 1103929

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.



CASE NARRATIVE

Print Date: 7/8/2010

Client Name: Shannon & Wilson-Fairbanks
Project Name: ADOT&PF Inj. Wells
Workorder No.: 1103929

Sample Comments

Refer to the sample receipt form for information on sample condition.

| <u>Lab Sample ID</u> | <u>Sample Type</u> | <u>Client Sample ID</u> |
|----------------------|---|--------------------------------|
| 971529 | * MS | 7368-063010-T...(1103929001MS) |
| | 6020 - MS/MSD recoveries for arsenic and lead are outside of acceptance criteria. Post-digestion spike was successful. | |
| 971530 | * MSD | 7368-063010-...(1103929001MSD) |
| | 6020 - MS/MSD recoveries for arsenic and lead are outside of acceptance criteria. Post-digestion spike was successful. 6020 - RPD for arsenic is outside of acceptance criteria. Sample/duplicate RPD is within acceptance criteria. | |
| 971864 | * MSD | 1103150001B(971862MSD) |
| | 8260B - MS/MSD does not meet RPD criteria for cis-1,2-dichloroethene. This analyte was not detected above the LOQ in the associated samples. 8260B - MSD recovery for cis-1,2-dichloroethene does not meet QC criteria (biased high). Refer to LCS for accuracy. | |
| 971893 | * CCV | CCV for HBN 496280 [VMS/11350] |
| | 8260B - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples. | |
| 972173 | * CCV | CCV for HBN 501480 (XMS/5504) |
| | 8270D - CCV recovery for 4-nitrophenol does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples. | |

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.



Laboratory Analytical Report

Client: **Shannon & Wilson-Fairbanks**
2055 Hill Road
Fairbanks, AK 997095244

Attn: **Andrea Carlson**
T: (907)479-0600 F:(907)479-5691
ac@shanwil.com

Project: **ADOT&PF Inj. Wells**

Workorder No.: **1103929**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Carmon Beene

Project Manager

Contents (Bookmarked in PDF):

- Cover Page
- Glossary
- Sample Summary Forms
- Case Narrative
- Sample Results Forms
- Batch Summary Forms (by method)
- Quality Control Summary Forms (by method)
- Chain of Custody/Sample Receipt Forms
- Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

| | |
|--------|--|
| * | The analyte has exceeded allowable regulatory or control limits. |
| ! | Surrogate out of control limits. |
| B | Indicates the analyte is found in a blank associated with the sample. |
| CCV | Continuing Calibration Verification |
| CL | Control Limit |
| D | The analyte concentration is the result of a dilution. |
| DF | Dilution Factor |
| DL | Detection Limit (i.e., maximum method detection limit) |
| E | The analyte result is above the calibrated range. |
| F | Indicates value that is greater than or equal to the DL |
| GT | Greater Than |
| ICV | Initial Calibration Verification |
| J | The quantitation is an estimation. |
| JL | The analyte was positively identified, but the quantitation is a low estimation. |
| LCS(D) | Laboratory Control Spike (Duplicate) |
| LOD | Limit of Detection (i.e., 2xDL) |
| LOQ | Limit of Quantitation (i.e., reporting or practical quantitation limit) |
| LT | Less Than |
| M | A matrix effect was present. |
| MB | Method Blank |
| MS(D) | Matrix Spike (Duplicate) |
| ND | Indicates the analyte is not detected. |
| Q | QC parameter out of acceptance range. |
| R | Rejected |
| RL | Reporting Limit |
| RPD | Relative Percent Difference |
| U | Indicates the analyte was analyzed for but not detected. |

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



SAMPLE SUMMARY

Print Date: 7/8/2010 4:46 pm

Client Name: Shannon & Wilson-Fairbanks

Project Name: ADOT&PF Inj. Wells

Workorder No.: 1103929

Analytical Methods

| <u>Method Description</u> | <u>Analytical Method</u> |
|--|--------------------------|
| Metals by ICP-MS (S) | SW6020 |
| Percent Solids SM2540G | SM20 2540G |
| SW846 8270 Semi-Volatiles by GC/MS (S) | SW8270D |
| VOC 8260 (S) Field Extracted | SW8260B |

Sample ID Cross Reference

| <u>Lab Sample ID</u> | <u>Client Sample ID</u> |
|----------------------|-------------------------|
| 1103929001 | 7368-063010-TRIMS |
| 1103929002 | Trip Blank |



Detectable Results Summary

Print Date: 7/8/2010 4:46 pm

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 57.1 | mg/Kg |
| Chromium | 11.1 | mg/Kg |
| Lead | 9.99 | mg/Kg |



Shannon & Wilson-Fairbanks

Print Date: 7/8/2010 4:46 pm

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Arsenic | 57.1 | 1.03 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Cadmium | 0.206 U | 0.206 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Chromium | 11.1 | 0.411 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Lead | 9.99 | 0.206 | mg/Kg | 10 | MMS6513 | MXX23178 | |

Batch Information

Analytical Batch: MMS6513

Analytical Method: SW6020

Analysis Date/Time: 07/07/10 20:47

Dilution Factor: 10

Prep Batch: MXX23178

Prep Method: SW3050B

Prep Date/Time: 07/06/10 12:15

Initial Prep Wt./Vol.: 1.03 g

Prep Extract Vol.: 50 mL

Container ID:1103929001-A

Analyst: NRB

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1,1-Trichloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2,2-Tetrachloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2-Trichloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloropropene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichloropropane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trichlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trimethylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromo-3-chloropropane | 0.0926 U | 0.0926 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromoethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloropropane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,3,5-Trimethylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichloropropane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 1,4-Dichlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 2,2-Dichloropropane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 2-Butanone (MEK) | 0.231 U | 0.231 | mg/Kg | 1 | VMS11350 | | |
| 2-Chlorotoluene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 2-Hexanone | 0.231 U | 0.231 | mg/Kg | 1 | VMS11350 | | |
| 4-Chlorotoluene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 4-Isopropyltoluene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.231 U | 0.231 | mg/Kg | 1 | VMS11350 | | |
| Benzene | 0.0116 U | 0.0116 | mg/Kg | 1 | VMS11350 | | |
| Bromobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Bromochloromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Bromodichloromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Bromoform | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Bromomethane | 0.185 U | 0.185 | mg/Kg | 1 | VMS11350 | | |
| Carbon disulfide | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Carbon tetrachloride | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Chlorobenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| Chloroethane | 0.185 U | 0.185 | mg/Kg | 1 | VMS11350 | | |
| Chloroform | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Chloromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| cis-1,2-Dichloroethene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| cis-1,3-Dichloropropene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Dibromochloromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Dibromomethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Dichlorodifluoromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Ethylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Hexachlorobutadiene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Isopropylbenzene (Cumene) | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Methylene chloride | 0.0926 U | 0.0926 | mg/Kg | 1 | VMS11350 | | |
| Methyl-t-butyl ether | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Naphthalene | 0.0463 U | 0.0463 | mg/Kg | 1 | VMS11350 | | |
| n-Butylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| n-Propylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| o-Xylene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| P & M -Xylene | 0.0463 U | 0.0463 | mg/Kg | 1 | VMS11350 | | |
| sec-Butylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Styrene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| tert-Butylbenzene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Tetrachloroethene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Toluene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| trans-1,2-Dichloroethene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| trans-1,3-Dichloropropene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Trichloroethene | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Trichlorofluoromethane | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Vinyl chloride | 0.0231 U | 0.0231 | mg/Kg | 1 | VMS11350 | | |
| Xylenes (total) | 0.0694 U | 0.0694 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane-D4 <surr> | 98.4 | 69-132 | % | 1 | VMS11350 | | |
| 4-Bromofluorobenzene <surr> | 94.8 | 65-144 | % | 1 | VMS11350 | | |
| Toluene-d8 <surr> | 112 | 84-124 | % | 1 | VMS11350 | | |



Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11350 | | | | | | Initial Prep Wt./Vol.: 65.468 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/06/10 09:52 | | | | | | Container ID:1103929001-C | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |



Client Sample ID: 7368-063010-TRIMS

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| 1,2,4-Trichlorobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 1,2-Dichlorobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 1,3-Dichlorobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 1,4-Dichlorobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4,5-Trichlorophenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4,6-Trichlorophenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4-Dichlorophenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4-Dimethylphenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4-Dinitrophenol | 3.16 U | 3.16 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4-Dinitrotoluene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,6-Dinitrotoluene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Chloronaphthalene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Chlorophenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Methyl-4,6-dinitrophenol | 2.11 U | 2.11 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Methylnaphthalene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Methylphenol (o-Cresol) | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Nitroaniline | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2-Nitrophenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 3&4-Methylphenol (p&m-Cresol) | 1.05 U | 1.05 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 3,3-Dichlorobenzidine | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 3-Nitroaniline | 0.527 U | 0.527 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Bromophenyl-phenylether | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Chloro-3-methylphenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Chloroaniline | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Chlorophenyl-phenylether | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Nitroaniline | 3.16 U | 3.16 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 4-Nitrophenol | 1.05 U | 1.05 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Acenaphthene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Acenaphthylene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Aniline | 2.11 U | 2.11 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Anthracene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Azobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzo(a)Anthracene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzo[a]pyrene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzo[b]Fluoranthene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzo[g,h,i]perylene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |



Client Sample ID: 7368-063010-TRIMS

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Benzo[k]fluoranthene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzoic acid | 1.58 U | 1.58 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Benzyl alcohol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Bis(2chloro1methylethyl)Ether | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Bis(2-Chloroethoxy)methane | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Bis(2-Chloroethyl)ether | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| bis(2-Ethylhexyl)phthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Butylbenzylphthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Chrysene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Dibenzo[a,h]anthracene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Dibenzofuran | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Diethylphthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Dimethylphthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Di-n-butylphthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| di-n-Octylphthalate | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Fluoranthene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Fluorene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Hexachlorobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Hexachlorobutadiene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Hexachlorocyclopentadiene | 0.737 U | 0.737 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Hexachloroethane | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Indeno[1,2,3-c,d] pyrene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Isophorone | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Naphthalene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Nitrobenzene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| N-Nitrosodimethylamine | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| N-Nitroso-di-n-propylamine | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| N-Nitrosodiphenylamine | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Pentachlorophenol | 2.11 U | 2.11 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Phenanthrene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Phenol | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| Pyrene | 0.263 U | 0.263 | mg/Kg | 1 | XMS5502 | XXX22965 | |
| 2,4,6-Tribromophenol <surr> | 95.8 | 47-125 | % | 1 | XMS5502 | XXX22965 | |
| 2-Fluorobiphenyl <surr> | 81.9 | 45-105 | % | 1 | XMS5502 | XXX22965 | |
| 2-Fluorophenol <surr> | 70.3 | 41-84 | % | 1 | XMS5502 | XXX22965 | |
| Nitrobenzene-d5 <surr> | 67.9 | 37-100 | % | 1 | XMS5502 | XXX22965 | |
| Phenol-d6 <surr> | 74.6 | 48-94 | % | 1 | XMS5502 | XXX22965 | |



Shannon & Wilson-Fairbanks

Print Date: 7/8/2010 4:46 pm

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|----------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Terphenyl-d14 <surr> | 99.9 | 50-120 | % | 1 | XMS5502 | XXX22965 | |

Batch Information

Analytical Batch: XMS5502

Analytical Method: SW8270D

Analysis Date/Time: 07/07/10 17:08

Dilution Factor: 1

Prep Batch: XXX22965

Prep Method: SW3550C

Prep Date/Time: 07/06/10 10:30

Initial Prep Wt./Vol.: 22.608 g

Prep Extract Vol.: 1 mL

Container ID:1103929001-A

Analyst: JDH



Shannon & Wilson-Fairbanks

Print Date: 7/8/2010 4:46 pm

Client Sample ID: **7368-063010-TRIMS**

SGS Ref. #: 1103929001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Solids

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Total Solids | 94.5 | | % | 1 | SPT8175 | | |

Batch Information

Analytical Batch: SPT8175

Analytical Method: SM20 2540G

Analysis Date/Time: 07/06/10 18:33

Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1103929001-A

Analyst: SH



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103929002
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/30/10 13:46
Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical</u> <u>Batch</u> | <u>Prep</u> <u>Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------------|-----------------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,1-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromo-3-chloropropane | 0.100 U | 0.100 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromoethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3,5-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,4-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2-Butanone (MEK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| 2-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2-Hexanone | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| 4-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 4-Isopropyltoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| Benzene | 0.0125 U | 0.0125 | mg/Kg | 1 | VMS11350 | | |
| Bromobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromodichloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromoform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromomethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11350 | | |
| Carbon disulfide | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Carbon tetrachloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Chlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103929002
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/30/10 13:46

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical</u> <u>Batch</u> | <u>Prep</u> <u>Batch</u> | <u>Qualifiers</u> |
|------------------------------|---------------|---------------|--------------|-----------|-----------------------------------|-----------------------------|-------------------|
| Chloroethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11350 | | |
| Chloroform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Chloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| cis-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| cis-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dibromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dibromomethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dichlorodifluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Ethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Hexachlorobutadiene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Isopropylbenzene (Cumene) | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Methylene chloride | 0.100 U | 0.100 | mg/Kg | 1 | VMS11350 | | |
| Methyl-t-butyl ether | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Naphthalene | 0.0502 U | 0.0502 | mg/Kg | 1 | VMS11350 | | |
| n-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| n-Propylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| o-Xylene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| P & M -Xylene | 0.0502 U | 0.0502 | mg/Kg | 1 | VMS11350 | | |
| sec-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Styrene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| tert-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Tetrachloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Toluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| trans-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| trans-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Trichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Trichlorofluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Vinyl chloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Xylenes (total) | 0.0752 U | 0.0752 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane-D4 <surr> | 105 | 69-132 | % | 1 | VMS11350 | | |
| 4-Bromofluorobenzene <surr> | 97.2 | 65-144 | % | 1 | VMS11350 | | |
| Toluene-d8 <surr> | 113 | 84-124 | % | 1 | VMS11350 | | |



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103929002
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 06/30/10 13:46
Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11350 | | | | | | Initial Prep Wt./Vol.: 49.849 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/06/10 04:48 | | | | | | Container ID:1103929002-A | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |



SGS Ref.# 971398 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch XXX22965
Method SW3550C
Date 07/06/2010

QC results affect the following production samples:

1103929001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------------------------------|---------|--------|--------|-------|---------------|
| Semivolatile Organic GC/MS | | | | | |
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/07/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/07/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/07/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |



SGS Ref.# 971398 Method Blank
 Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|--------------------------------|---------|-------|--------|-------|----------|
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/07/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2chloro 1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/07/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 87 | 47-125 | | % | 07/07/10 |
| 2-Fluorobiphenyl <surr> | 78.4 | 45-105 | | % | 07/07/10 |
| 2-Fluorophenol <surr> | 75.1 | 41-84 | | % | 07/07/10 |
| Nitrobenzene-d5 <surr> | 71 | 37-100 | | % | 07/07/10 |
| Phenol-d6 <surr> | 78.9 | 48-94 | | % | 07/07/10 |



SGS Ref.# 971398 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch XXX22965
Method SW3550C
Date 07/06/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|----------------------|------------------|--------|--|---|----------|
| Terphenyl-d14 <surr> | 99.1 | 50-120 | | % | 07/07/10 |
| Batch | XMS5502 | | | | |
| Method | SW8270D | | | | |
| Instrument | HP 6890/5973 SSA | | | | |



SGS Ref.# 971527 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch MXX23178
Method SW3050B
Date 07/06/2010

QC results affect the following production samples:

1103929001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/07/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/07/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/07/10 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971650 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch
Method
Date

QC results affect the following production samples:

1103929001

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 07/06/10 |
| Batch | SPT8175 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch
Method
Date

QC results affect the following production samples:
1103929001, 1103929002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|-----------|--------|---------|-------|----------|
| 1,1,1,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,1-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,2,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,2-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,3-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,3-Trichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,4-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,4-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dibromo-3-chloropropane | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/05/10 |
| 1,2-Dibromoethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3,5-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,4-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2-Butanone (MEK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| 2-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2-Hexanone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| 4-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 4-Isopropyltoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 4-Methyl-2-pentanone (MIBK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| Benzene | 0.00780 U | 0.0125 | 0.00390 | mg/Kg | 07/05/10 |
| Bromobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromodichloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromoform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromomethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/05/10 |
| Carbon disulfide | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Carbon tetrachloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chloroethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/05/10 |
| Chloroform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|----------|--------|---------|-------|----------|
| cis-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| cis-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dibromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dibromomethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dichlorodifluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Ethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Hexachlorobutadiene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Isopropylbenzene (Cumene) | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Methylene chloride | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/05/10 |
| Methyl-t-butyl ether | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Naphthalene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/05/10 |
| n-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| n-Propylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| o-Xylene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| P & M -Xylene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/05/10 |
| sec-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Styrene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| tert-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Tetrachloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Toluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| trans-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| trans-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Trichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Trichlorofluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Vinyl chloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Xylenes (total) | 0.0470 U | 0.0750 | 0.0235 | mg/Kg | 07/05/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 92.8 | 69-132 | | % | 07/05/10 |
| 4-Bromofluorobenzene <surr> | 87.2 | 65-144 | | % | 07/05/10 |
| Toluene-d8 <surr> | 99.9 | 84-124 | | % | 07/05/10 |

Batch VMS11350
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971532 Duplicate
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Original 1103929001
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch MXX23178
Method SW3050B
Date 7/6/2010 12:15:00PM

QC results affect the following production samples:

1103929001

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Metals by ICP/MS

| | | | | | | |
|-------------------|------------------------------|------|-------|---|--------|------------|
| Arsenic | 57.1 | 54.6 | mg/Kg | 4 | (< 20) | 07/07/2010 |
| Batch | MMS6513 | | | | | |
| Method | SW6020 | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | |



SGS Ref.# 971651 Duplicate
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Original 1103240001
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch
Method
Date

QC results affect the following production samples:

1103929001

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|--------------|------|------|---|---|--------|------------|
| Total Solids | 85.7 | 86.9 | % | 1 | (< 15) | 07/06/2010 |
|--------------|------|------|---|---|--------|------------|

Batch SPT8175
Method SM20 2540G
Instrument



SGS Ref.# 971400 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103929001

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 2.87 | 65 | (54-101) | | 4.44 mg/Kg | 07/08/2010 |
| 1,2-Dichlorobenzene | LCS | 2.80 | 63 | (52-92) | | 4.44 mg/Kg | 07/08/2010 |
| 1,3-Dichlorobenzene | LCS | 2.79 | 63 | (52-92) | | 4.44 mg/Kg | 07/08/2010 |
| 1,4-Dichlorobenzene | LCS | 2.71 | 61 | (51-92) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4,5-Trichlorophenol | LCS | 4.04 | 91 | (71-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.95 | 89 | (67-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dichlorophenol | LCS | 3.29 | 74 | (64-107) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dimethylphenol | LCS | 3.46 | 78 | (63-105) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dinitrophenol | LCS | 6.47 | 81 | (43-130) | | 8 mg/Kg | 07/08/2010 |
| 2,4-Dinitrotoluene | LCS | 4.33 | 97 | (64-115) | | 4.44 mg/Kg | 07/08/2010 |
| 2,6-Dinitrotoluene | LCS | 3.98 | 90 | (67-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Chloronaphthalene | LCS | 3.04 | 69 | (52-103) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Chlorophenol | LCS | 2.98 | 67 | (56-94) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.04 | 101 | (51-131) | | 8 mg/Kg | 07/08/2010 |
| 2-Methylnaphthalene | LCS | 3.39 | 76 | (61-105) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.02 | 68 | (61-101) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Nitroaniline | LCS | 4.11 | 92 | (70-120) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Nitrophenol | LCS | 3.25 | 73 | (65-101) | | 4.44 mg/Kg | 07/08/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.76 | 77 | (65-105) | | 6.22 mg/Kg | 07/08/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.44 | 100 | (49-128) | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep XXX22965
Batch SW3550C
Method
Date 07/06/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 3-Nitroaniline | LCS | 4.15 | 93 | (66-110) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Bromophenyl-phenylether | LCS | 3.35 | 75 | (53-102) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.87 | 87 | (69-114) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chloroaniline | LCS | 3.15 | 71 | (58-102) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.74 | 84 | (53-110) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Nitroaniline | LCS | 4.21 | 95 | (63-115) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Nitrophenol | LCS | 6.10 | 98 | (44-137) | | 6.22 mg/Kg | 07/08/2010 |
| Acenaphthene | LCS | 3.64 | 82 | (57-110) | | 4.44 mg/Kg | 07/08/2010 |
| Acenaphthylene | LCS | 3.69 | 83 | (56-105) | | 4.44 mg/Kg | 07/08/2010 |
| Aniline | LCS | 2.46 | 55 | (40-92) | | 4.44 mg/Kg | 07/08/2010 |
| Anthracene | LCS | 4.06 | 91 | (65-105) | | 4.44 mg/Kg | 07/08/2010 |
| Azobenzene | LCS | 3.92 | 88 | (54-120) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo(a)Anthracene | LCS | 4.26 | 96 | (72-110) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[a]pyrene | LCS | 4.30 | 97 | (71-110) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[b]Fluoranthene | LCS | 3.95 | 89 | (70-115) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[g,h,i]perylene | LCS | 4.63 | 104 | (52-125) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[k]fluoranthene | LCS | 4.26 | 96 | (66-125) | | 4.44 mg/Kg | 07/08/2010 |
| Benzoic acid | LCS | 2.21 | 36 | (25-76) | | 6.22 mg/Kg | 07/08/2010 |
| Benzyl alcohol | LCS | 3.14 | 71 | (61-110) | | 4.44 mg/Kg | 07/08/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 2.91 | 65 | (50-97) | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample
 Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| Bis(2-Chloroethoxy)methane | LCS | 3.24 | 73 | (57-104) | | 4.44 mg/Kg | 07/08/2010 |
| Bis(2-Chloroethyl)ether | LCS | 2.75 | 62 | (49-91) | | 4.44 mg/Kg | 07/08/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.40 | 99 | (62-120) | | 4.44 mg/Kg | 07/08/2010 |
| Butylbenzylphthalate | LCS | 4.53 | 102 | (69-120) | | 4.44 mg/Kg | 07/08/2010 |
| Chrysene | LCS | 4.16 | 94 | (72-110) | | 4.44 mg/Kg | 07/08/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.47 | 101 | (61-125) | | 4.44 mg/Kg | 07/08/2010 |
| Dibenzofuran | LCS | 3.84 | 86 | (60-105) | | 4.44 mg/Kg | 07/08/2010 |
| Diethylphthalate | LCS | 4.20 | 94 | (50-115) | | 4.44 mg/Kg | 07/08/2010 |
| Dimethylphthalate | LCS | 3.96 | 89 | (59-110) | | 4.44 mg/Kg | 07/08/2010 |
| Di-n-butylphthalate | LCS | 4.19 | 94 | (56-110) | | 4.44 mg/Kg | 07/08/2010 |
| di-n-Octylphthalate | LCS | 4.54 | 102 | (61-123) | | 4.44 mg/Kg | 07/08/2010 |
| Fluoranthene | LCS | 4.31 | 97 | (64-115) | | 4.44 mg/Kg | 07/08/2010 |
| Fluorene | LCS | 3.33 | 75 | (64-110) | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorobenzene | LCS | 4.05 | 91 | (63-120) | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorobutadiene | LCS | 3.30 | 74 | (57-107) | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorocyclopentadiene | LCS | 3.42 | 77 | (35-102) | | 4.44 mg/Kg | 07/08/2010 |
| Hexachloroethane | LCS | 2.79 | 63 | (51-89) | | 4.44 mg/Kg | 07/08/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.44 | 100 | (60-120) | | 4.44 mg/Kg | 07/08/2010 |
| Isophorone | LCS | 3.44 | 77 | (57-108) | | 4.44 mg/Kg | 07/08/2010 |
| Naphthalene | LCS | 3.09 | 70 | (51-105) | | 4.44 mg/Kg | 07/08/2010 |
| Nitrobenzene | LCS | 3.16 | 71 | (53-99) | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|----|------------|--|------------|------------|
| N-Nitrosodimethylamine | LCS | 2.68 | 60 | (45-90) | | 4.44 mg/Kg | 07/08/2010 |
| N-Nitroso-di-n-propylamine | LCS | 2.91 | 65 | (59-100) | | 4.44 mg/Kg | 07/08/2010 |
| N-Nitrosodiphenylamine | LCS | 3.33 | 75 | (61-114) | | 4.44 mg/Kg | 07/08/2010 |
| Pentachlorophenol | LCS | 6.05 | 97 | (56-117) | | 6.22 mg/Kg | 07/08/2010 |
| Phenanthrene | LCS | 4.06 | 91 | (63-110) | | 4.44 mg/Kg | 07/08/2010 |
| Phenol | LCS | 3.08 | 69 | (56-97) | | 4.44 mg/Kg | 07/08/2010 |
| Pyrene | LCS | 4.08 | 92 | (70-123) | | 4.44 mg/Kg | 07/08/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 91 | (47-125) | | | 07/08/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 78 | (45-105) | | | 07/08/2010 |
| 2-Fluorophenol <surr> | LCS | | 67 | (41-84) | | | 07/08/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 70 | (37-100) | | | 07/08/2010 |
| Phenol-d6 <surr> | LCS | | 68 | (48-94) | | | 07/08/2010 |
| Terphenyl-d14 <surr> | LCS | | 93 | (50-120) | | | 07/08/2010 |

Batch XMS5504
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 971528 Lab Control Sample
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/08/2010 16:46
Prep Batch MXX23178
Method SW3050B
Date 07/06/2010

QC results affect the following production samples:

1103929001

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------|-----------------|------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | |
| Arsenic | LCS | 50.7 | 101 | (80-120) | | 50 mg/Kg | 07/07/2010 |
| Cadmium | LCS | 4.90 | 98 | (80-120) | | 5 mg/Kg | 07/07/2010 |
| Chromium | LCS | 19.0 | 95 | (80-120) | | 20 mg/Kg | 07/07/2010 |
| Lead | LCS | 47.8 | 96 | (80-120) | | 50 mg/Kg | 07/07/2010 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/08/2010 16:46

Client Name Shannon & Wilson-Fairbanks

Project Name/# ADOT&PF Inj. Wells

Matrix Soil/Solid (dry weight)

Prep Batch
Method
Date

QC results affect the following production samples:

1103929001, 1103929002

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|---------------|--------------|--------------------|-----|---------------|------------------|------------------|
|-----------|---------------|--------------|--------------------|-----|---------------|------------------|------------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 0.778 | 104 | (77-123) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,1-Trichloroethane | LCS | 0.783 | 104 | (77-129) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 0.691 | 92 | (80-122) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,2-Trichloroethane | LCS | 0.704 | 94 | (85-121) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethane | LCS | 0.779 | 104 | (81-126) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethene | LCS | 0.839 | 112 | (75-125) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloropropene | LCS | 0.783 | 104 | (76-134) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,3-Trichlorobenzene | LCS | 0.748 | 100 | (78-124) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,3-Trichloropropane | LCS | 0.653 | 87 | (77-125) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,4-Trichlorobenzene | LCS | 0.755 | 101 | (77-126) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,4-Trimethylbenzene | LCS | 0.721 | 96 | (85-121) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 0.635 | 85 | (60-135) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dibromoethane | LCS | 0.774 | 103 | (85-124) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | LCS | 0.760 | 101 | (88-113) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichloroethane | LCS | 0.729 | 97 | (83-121) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichloropropane | LCS | 0.767 | 102 | (81-120) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | LCS | 0.689 | 92 | (87-120) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,3-Dichlorobenzene | LCS | 0.750 | 100 | (86-117) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,3-Dichloropropane | LCS | 0.797 | 106 | (84-123) | | | 0.750 mg/Kg | 07/06/2010 |
| 1,4-Dichlorobenzene | LCS | 0.759 | 101 | (86-118) | | | 0.750 mg/Kg | 07/06/2010 |
| 2,2-Dichloropropane | LCS | 0.817 | 109 | (69-132) | | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|-----------------------------|-----|-------|-----|------------|--|-------------|------------|
| 2-Butanone (MEK) | LCS | 2.12 | 94 | (57-135) | | 2.25 mg/Kg | 07/06/2010 |
| 2-Chlorotoluene | LCS | 0.708 | 94 | (81-122) | | 0.750 mg/Kg | 07/06/2010 |
| 2-Hexanone | LCS | 2.07 | 92 | (58-145) | | 2.25 mg/Kg | 07/06/2010 |
| 4-Chlorotoluene | LCS | 0.731 | 98 | (84-120) | | 0.750 mg/Kg | 07/06/2010 |
| 4-Isopropyltoluene | LCS | 0.680 | 91 | (83-121) | | 0.750 mg/Kg | 07/06/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2.29 | 102 | (67-135) | | 2.25 mg/Kg | 07/06/2010 |
| Benzene | LCS | 0.791 | 106 | (81-124) | | 0.750 mg/Kg | 07/06/2010 |
| Bromobenzene | LCS | 0.753 | 100 | (86-119) | | 0.750 mg/Kg | 07/06/2010 |
| Bromochloromethane | LCS | 0.861 | 115 | (79-125) | | 0.750 mg/Kg | 07/06/2010 |
| Bromodichloromethane | LCS | 0.716 | 96 | (81-127) | | 0.750 mg/Kg | 07/06/2010 |
| Bromoform | LCS | 0.781 | 104 | (72-135) | | 0.750 mg/Kg | 07/06/2010 |
| Bromomethane | LCS | 0.681 | 91 | (49-141) | | 0.750 mg/Kg | 07/06/2010 |
| Carbon disulfide | LCS | 1.19 | 106 | (58-155) | | 1.13 mg/Kg | 07/06/2010 |
| Carbon tetrachloride | LCS | 0.744 | 99 | (79-128) | | 0.750 mg/Kg | 07/06/2010 |
| Chlorobenzene | LCS | 0.755 | 101 | (84-121) | | 0.750 mg/Kg | 07/06/2010 |
| Chloroethane | LCS | 0.708 | 94 | (51-141) | | 0.750 mg/Kg | 07/06/2010 |
| Chloroform | LCS | 0.769 | 103 | (77-124) | | 0.750 mg/Kg | 07/06/2010 |
| Chloromethane | LCS | 0.642 | 86 | (54-129) | | 0.750 mg/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | LCS | 0.788 | 105 | (82-124) | | 0.750 mg/Kg | 07/06/2010 |
| cis-1,3-Dichloropropene | LCS | 0.788 | 105 | (82-122) | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| Dibromochloromethane | LCS | 0.766 | 102 | (84-125) | | 0.750 mg/Kg | 07/06/2010 |
| Dibromomethane | LCS | 0.802 | 107 | (80-123) | | 0.750 mg/Kg | 07/06/2010 |
| Dichlorodifluoromethane | LCS | 0.670 | 89 | (43-135) | | 0.750 mg/Kg | 07/06/2010 |
| Ethylbenzene | LCS | 0.766 | 102 | (87-119) | | 0.750 mg/Kg | 07/06/2010 |
| Hexachlorobutadiene | LCS | 0.793 | 106 | (74-124) | | 0.750 mg/Kg | 07/06/2010 |
| Isopropylbenzene (Cumene) | LCS | 0.796 | 106 | (89-121) | | 0.750 mg/Kg | 07/06/2010 |
| Methylene chloride | LCS | 0.688 | 92 | (63-137) | | 0.750 mg/Kg | 07/06/2010 |
| Methyl-t-butyl ether | LCS | 1.13 | 101 | (76-133) | | 1.13 mg/Kg | 07/06/2010 |
| Naphthalene | LCS | 0.700 | 93 | (73-131) | | 0.750 mg/Kg | 07/06/2010 |
| n-Butylbenzene | LCS | 0.744 | 99 | (82-127) | | 0.750 mg/Kg | 07/06/2010 |
| n-Propylbenzene | LCS | 0.695 | 93 | (82-125) | | 0.750 mg/Kg | 07/06/2010 |
| o-Xylene | LCS | 0.781 | 104 | (89-120) | | 0.750 mg/Kg | 07/06/2010 |
| P & M -Xylene | LCS | 1.55 | 104 | (88-121) | | 1.50 mg/Kg | 07/06/2010 |
| sec-Butylbenzene | LCS | 0.708 | 94 | (84-122) | | 0.750 mg/Kg | 07/06/2010 |
| Styrene | LCS | 0.790 | 105 | (91-120) | | 0.750 mg/Kg | 07/06/2010 |
| tert-Butylbenzene | LCS | 0.723 | 96 | (82-122) | | 0.750 mg/Kg | 07/06/2010 |
| Tetrachloroethene | LCS | 0.752 | 100 | (82-125) | | 0.750 mg/Kg | 07/06/2010 |
| Toluene | LCS | 0.827 | 110 | (87-119) | | 0.750 mg/Kg | 07/06/2010 |
| trans-1,2-Dichloroethene | LCS | 0.796 | 106 | (79-125) | | 0.750 mg/Kg | 07/06/2010 |
| trans-1,3-Dichloropropene | LCS | 0.770 | 103 | (86-122) | | 0.750 mg/Kg | 07/06/2010 |
| Trichloroethene | LCS | 0.817 | 109 | (77-124) | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/08/2010 16:46
 Prep Batch

Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Method
 Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-------|----|------------|--|-------------|------------|
| Trichlorofluoromethane | LCS | 0.700 | 93 | (64-139) | | 0.750 mg/Kg | 07/06/2010 |
|------------------------|-----|-------|----|------------|--|-------------|------------|

| | | | | | | | |
|----------------|-----|-------|----|------------|--|-------------|------------|
| Vinyl chloride | LCS | 0.735 | 98 | (67-125) | | 0.750 mg/Kg | 07/06/2010 |
|----------------|-----|-------|----|------------|--|-------------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2.34 | 104 | (89-120) | | 2.25 mg/Kg | 07/06/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 96 | (69-132) | | | 07/06/2010 |
|------------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 89 | (65-144) | | | 07/06/2010 |
|-----------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 105 | (84-124) | | | 07/06/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11350
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103929001

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (0.263) U | 3.32 | 71 | (54-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.47 | 75 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,2-Dichlorobenzene | MS | (0.263) U | 3.32 | 71 | (52-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.44 | 74 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,3-Dichlorobenzene | MS | (0.263) U | 3.16 | 68 | (52-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.31 | 71 | | 5 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,4-Dichlorobenzene | MS | (0.263) U | 3.20 | 68 | (51-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.29 | 71 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4,5-Trichlorophenol | MS | (0.263) U | 4.49 | 96 | (71-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.66 | 100 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4,6-Trichlorophenol | MS | (0.263) U | 4.61 | 98 | (67-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.65 | 100 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dichlorophenol | MS | (0.263) U | 3.84 | 82 | (64-107) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.99 | 86 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dimethylphenol | MS | (0.263) U | 3.85 | 82 | (63-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.99 | 86 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dinitrophenol | MS | (3.16) U | 7.24 | 86 | (43-130) | | | 8.43 mg/Kg | 07/07/2010 |
| | MSD | | 7.80 | 93 | | 7 | (< 30) | 8.38 mg/Kg | 07/07/2010 |
| 2,4-Dinitrotoluene | MS | (0.263) U | 4.77 | 102 | (64-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.87 | 105 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,6-Dinitrotoluene | MS | (0.263) U | 4.39 | 94 | (67-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.49 | 96 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Chloronaphthalene | MS | (0.263) U | 3.65 | 78 | (52-103) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.74 | 80 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Chlorophenol | MS | (0.263) U | 3.49 | 75 | (56-94) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.72 | 80 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (2.11) U | 9.19 | 109 | (51-131) | | | 8.43 mg/Kg | 07/07/2010 |
| | MSD | | 9.31 | 111 | | 1 | (< 30) | 8.38 mg/Kg | 07/07/2010 |
| 2-Methylnaphthalene | MS | (0.263) U | 3.83 | 82 | (61-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.13 | 89 | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Methylphenol (o-Cresol) | MS | (0.263) U | 3.65 | 78 | (61-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.96 | 85 | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Nitroaniline | MS | (0.263) U | 4.50 | 96 | (70-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.57 | 98 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Nitrophenol | MS | (0.263) U | 3.90 | 83 | (65-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.05 | 87 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 3&4-Methylphenol (p&m-Cresol) | MS | (1.05) U | 5.79 | 88 | (65-105) | | | 6.56 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|--------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| | MSD | | 6.34 | 97 | | 9 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| 3,3-Dichlorobenzidine | MS (0.263) U | 4.86 | 104 | (49-128) | | 4 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 5.05 | 108 | | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 3-Nitroaniline | MS (0.527) U | 4.73 | 101 | (66-110) | | 0 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.71 | 101 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Bromophenyl-phenylether | MS (0.263) U | 3.65 | 78 | (53-102) | | 2 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.70 | 80 | | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chloro-3-methylphenol | MS (0.263) U | 4.24 | 91 | (69-114) | | 8 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.57 | 98 | | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chloroaniline | MS (0.263) U | 3.82 | 82 | (58-102) | | 7 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.08 | 88 | | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chlorophenyl-phenylether | MS (0.263) U | 4.11 | 88 | (53-110) | | 1 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.15 | 89 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Nitroaniline | MS (3.16) U | 4.86 | 104 | (63-115) | | 3 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 5.02 | 108 | | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Nitrophenol | MS (1.05) U | 6.71 | 102 | (44-137) | | 4 | (< 30) | 6.56 mg/Kg | 07/07/2010 |
| | MSD | 6.94 | 107 | | | 4 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| Acenaphthene | MS (0.263) U | 4.05 | 87 | (57-110) | | 0 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.06 | 87 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Acenaphthylene | MS (0.263) U | 4.14 | 88 | (56-105) | | 1 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.18 | 90 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Aniline | MS (2.11) U | 3.38 | 72 | (40-92) | | 9 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.70 | 80 | | | 9 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Anthracene | MS (0.263) U | 4.42 | 94 | (65-105) | | 0 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.42 | 95 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Azobenzene | MS (0.263) U | 4.29 | 92 | (54-120) | | 0 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.26 | 92 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo(a)Anthracene | MS (0.263) U | 4.60 | 98 | (72-110) | | 4 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.79 | 103 | | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[a]pyrene | MS (0.263) U | 4.56 | 97 | (71-110) | | 2 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.63 | 99 | | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[b]Fluoranthene | MS (0.263) U | 4.53 | 97 | (70-115) | | 3 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.69 | 101 | | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[g,h,i]perylene | MS (0.263) U | 4.77 | 102 | (52-125) | | 1 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.81 | 103 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[k]fluoranthene | MS (0.263) U | 3.80 | 81 | (66-125) | | 7 | (< 30) | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.53 | 76 | | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzoic acid | MS (1.58) U | 2.24 | 34 | (25-76) | | 21 | (< 30) | 6.56 mg/Kg | 07/07/2010 |
| | MSD | 2.78 | 43 | | | 21 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| Benzyl alcohol | MS (0.263) U | 3.82 | 82 | (61-110) | | | | 4.69 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| | | MSD | 4.20 | 90 | | 10 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2chloro1methylethyl)Ether | | MS (0.263) U | 3.39 | 72 | (50-97) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.63 | 78 | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2-Chloroethoxy)methane | | MS (0.263) U | 3.66 | 78 | (57-104) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.87 | 83 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2-Chloroethyl)ether | | MS (0.263) U | 3.35 | 72 | (49-91) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.53 | 76 | | 5 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| bis(2-Ethylhexyl)phthalate | | MS (0.263) U | 4.72 | 101 | (62-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.89 | 105 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Butylbenzylphthalate | | MS (0.263) U | 4.88 | 104 | (69-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.97 | 107 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Chrysene | | MS (0.263) U | 4.31 | 92 | (72-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.36 | 94 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dibenzo[a,h]anthracene | | MS (0.263) U | 4.74 | 101 | (61-125) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.77 | 102 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dibenzofuran | | MS (0.263) U | 4.23 | 90 | (60-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.31 | 92 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Diethylphthalate | | MS (0.263) U | 4.43 | 95 | (50-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.59 | 99 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dimethylphthalate | | MS (0.263) U | 4.36 | 93 | (59-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.43 | 95 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Di-n-butylphthalate | | MS (0.263) U | 4.50 | 96 | (56-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.55 | 98 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| di-n-Octylphthalate | | MS (0.263) U | 4.77 | 102 | (61-123) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.93 | 106 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Fluoranthene | | MS (0.263) U | 4.50 | 96 | (64-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.54 | 98 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Fluorene | | MS (0.263) U | 3.64 | 78 | (64-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.74 | 80 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorobenzene | | MS (0.263) U | 4.54 | 97 | (63-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.59 | 99 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorobutadiene | | MS (0.263) U | 3.77 | 80 | (57-107) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.86 | 83 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorocyclopentadiene | | MS (0.737) U | 4.11 | 88 | (35-102) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.07 | 87 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachloroethane | | MS (0.263) U | 3.27 | 70 | (51-89) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.38 | 73 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Indeno[1,2,3-c,d] pyrene | | MS (0.263) U | 4.60 | 98 | (60-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.67 | 100 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Isophorone | 40 of 52 | MS (0.263) U | 3.85 | 82 | (57-108) | | | 4.69 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike **Printed Date/Time** 07/08/2010 16:46
 971403 Matrix Spike Duplicate **Prep Batch** XXX22965
Method Sonication Extraction Soil SW8
Date 07/06/2010
Original 1103929001
Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | | | |
|----------------------------|--------------|------|------|------------|----|--------|--------|------------|------------|
| | MSD | | 4.10 | 88 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Naphthalene | MS (0.263) U | 3.52 | 75 | (51-105) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.68 | 79 | | 5 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| Nitrobenzene | MS (0.263) U | 3.61 | 77 | (53-99) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.68 | 79 | | 2 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| N-Nitrosodimethylamine | MS (0.263) U | 3.47 | 74 | (45-90) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.50 | 75 | | 1 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| N-Nitroso-di-n-propylamine | MS (0.263) U | 3.67 | 78 | (59-100) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.10 | 88 | | 11 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| N-Nitrosodiphenylamine | MS (0.263) U | 3.70 | 79 | (61-114) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.62 | 78 | | 2 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| Pentachlorophenol | MS (2.11) U | 6.86 | 105 | (56-117) | | | | 6.56 mg/Kg | 07/07/2010 |
| | MSD | 6.96 | 107 | | 2 | (< 30) | | 6.52 mg/Kg | 07/07/2010 |
| Phenanthrene | MS (0.263) U | 4.44 | 95 | (63-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.40 | 95 | | 1 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| Phenol | MS (0.263) U | 3.71 | 79 | (56-97) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.94 | 85 | | 6 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |
| Pyrene | MS (0.263) U | 4.42 | 95 | (70-123) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.51 | 97 | | 2 | (< 30) | | 4.66 mg/Kg | 07/07/2010 |

Surrogates

| | | | | | | | | | |
|-----------------------------|-----|------|-----|------------|---|--|--|--|------------|
| 2,4,6-Tribromophenol <surr> | MS | 9.28 | 99 | (47-125) | | | | | 07/07/2010 |
| | MSD | 9.40 | 101 | | 1 | | | | 07/07/2010 |
| 2-Fluorobiphenyl <surr> | MS | 4.02 | 86 | (45-105) | | | | | 07/07/2010 |
| | MSD | 4.02 | 86 | | 0 | | | | 07/07/2010 |
| 2-Fluorophenol <surr> | MS | 6.65 | 71 | (41-84) | | | | | 07/07/2010 |
| | MSD | 6.65 | 71 | | 0 | | | | 07/07/2010 |
| Nitrobenzene-d5 <surr> | MS | 3.64 | 78 | (37-100) | | | | | 07/07/2010 |
| | MSD | 3.72 | 80 | | 2 | | | | 07/07/2010 |
| Phenol-d6 <surr> | MS | 7.43 | 79 | (48-94) | | | | | 07/07/2010 |
| | MSD | 7.77 | 83 | | 4 | | | | 07/07/2010 |
| Terphenyl-d14 <surr> | MS | 4.55 | 97 | (50-120) | | | | | 07/07/2010 |
| | MSD | 4.67 | 100 | | 3 | | | | 07/07/2010 |

Batch XMS5502
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 971529 Matrix Spike
 971530 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch MXX23178
 Method Soils/Solids Digest for Metals b
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103929001

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------------|-----------|-----------|-----------------|-----|--------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | MS | 57.1 | 162 | | 211* (80-120) | | | 49.5 mg/Kg | 07/07/2010 |
| | MSD | | 97.1 | | 77* | | 50 * (< 20) | 51.9 mg/Kg | 07/07/2010 |
| Cadmium | MS | (0.206) U | 5.01 | | 101 (80-120) | | | 4.95 mg/Kg | 07/07/2010 |
| | MSD | | 5.14 | | 99 | | 3 (< 20) | 5.19 mg/Kg | 07/07/2010 |
| Chromium | MS | 11.1 | 32.2 | | 107 (80-120) | | | 19.8 mg/Kg | 07/07/2010 |
| | MSD | | 29.2 | | 88 | | 10 (< 20) | 20.7 mg/Kg | 07/07/2010 |
| Lead | MS | 9.99 | 48.5 | | 78* (80-120) | | | 49.5 mg/Kg | 07/07/2010 |
| | MSD | | 48.7 | | 75* | | 0 (< 20) | 51.9 mg/Kg | 07/07/2010 |

Batch MMS6513
 Method SW6020
 Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971531 Bench Spike DIGESTED

Printed Date/Time 07/08/2010 16:46
Prep Batch MXX23178
Method Soils/Solids Digest for Metals b
Date 07/06/2010

Original 1103929001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:

1103929001

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Metals by ICP/MS

| | | | | | | | | | |
|---------|-----|------|------|----|------------|--|--|------------|------------|
| Arsenic | BND | 57.1 | 68.9 | 92 | (75-125) | | | 12.8 mg/Kg | 07/07/2010 |
| Lead | BND | 9.99 | 116 | 83 | (75-125) | | | 128 mg/Kg | 07/07/2010 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971863 Matrix Spike
971864 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
Prep Batch
Method
Date

Original 971862
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:

1103929001, 1103929002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|--------------------|--------------|--------------|------------------|-----|---------------|------------------|------------------|
|-----------|------------|--------------------|--------------|--------------|------------------|-----|---------------|------------------|------------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | MS | (0.00962) U | 0.466 | 101 | (77-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.510 | 110 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,1-Trichloroethane | MS | (0.00962) U | 0.431 | 93 | (77-129) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.475 | 103 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (0.00962) U | 0.506 | 110 | (80-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.520 | 112 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,2-Trichloroethane | MS | (0.00962) U | 0.527 | 114 | (85-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.508 | 110 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethane | MS | (0.00962) U | 0.450 | 97 | (81-126) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.481 | 104 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethene | MS | (0.00962) U | 0.464 | 100 | (75-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.527 | 114 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloropropene | MS | (0.00962) U | 0.429 | 93 | (76-134) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.468 | 101 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,3-Trichlorobenzene | MS | (0.00962) U | 0.420 | 91 | (78-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.485 | 105 | | 14 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,3-Trichloropropane | MS | (0.00962) U | 0.500 | 108 | (77-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.520 | 113 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,4-Trichlorobenzene | MS | (0.00962) U | 0.485 | 105 | (77-126) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.501 | 108 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,4-Trimethylbenzene | MS | 0.0549 | 0.479 | 92 | (85-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.542 | 105 | | 12 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (0.0382) U | 0.455 | 99 | (60-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dibromoethane | MS | (0.00962) U | 0.483 | 105 | (85-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.504 | 109 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | MS | (0.00962) U | 0.464 | 100 | (88-113) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.495 | 107 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichloroethane | MS | (0.00962) U | 0.441 | 95 | (83-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.429 | 93 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichloropropane | MS | (0.00962) U | 0.457 | 99 | (81-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.478 | 103 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | MS | 0.0740 | 0.523 | 97 | (87-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.559 | 105 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3-Dichlorobenzene | MS | (0.00962) U | 0.443 | 96 | (86-117) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.493 | 107 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3-Dichloropropane | MS | (0.00962) U | 0.491 | 106 | (84-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.508 | 110 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,4-Dichlorobenzene | MS | (0.00962) U | 0.460 | 99 | (86-118) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.496 | 107 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|------|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 2,2-Dichloropropane | MS | (0.00962) U | 0.437 | 95 | (69-132) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.469 | 101 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 2-Butanone (MEK) | MS | (0.0962) U | 1.44 | 104 | (57-135) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.32 | 95 | | 9 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| 2-Chlorotoluene | MS | (0.00962) U | 0.438 | 95 | (81-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.500 | 108 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 2-Hexanone | MS | (0.0962) U | 1.49 | 108 | (58-145) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.49 | 108 | | 0 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| 4-Chlorotoluene | MS | (0.00962) U | 0.428 | 93 | (84-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.476 | 103 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 4-Isopropyltoluene | MS | 0.0122J | 0.458 | 97 | (83-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.539 | 114 | | 16 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (0.0962) U | 1.65 | 119 | (67-135) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.59 | 115 | | 4 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| Benzene | MS | 0.0321 | 0.492 | 100 | (81-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.503 | 102 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromobenzene | MS | (0.00962) U | 0.462 | 100 | (86-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.501 | 109 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromochloromethane | MS | (0.00962) U | 0.479 | 104 | (79-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.504 | 109 | | 5 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromodichloromethane | MS | (0.00962) U | 0.444 | 96 | (81-127) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.451 | 98 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromoform | MS | (0.00962) U | 0.488 | 106 | (72-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.492 | 106 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromomethane | MS | (0.0766) U | 0.360 | 78 | (49-141) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.402 | 87 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Carbon disulfide | MS | (0.00962) U | 0.646 | 93 | (58-155) | | | 0.693 mg/Kg | 07/06/2010 |
| | MSD | | 0.696 | 100 | | 8 | (< 20) | 0.693 mg/Kg | 07/06/2010 |
| Carbon tetrachloride | MS | (0.00962) U | 0.422 | 91 | (79-128) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 5 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chlorobenzene | MS | (0.00962) U | 0.463 | 100 | (84-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.505 | 109 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloroethane | MS | (0.0766) U | 0.398 | 86 | (51-141) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloroform | MS | (0.00962) U | 0.458 | 99 | (77-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.466 | 101 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloromethane | MS | (0.00962) U | 0.357 | 77 | (54-129) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.381 | 82 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | MS | (0.00962) U | 0.464 | 100 | (82-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.370 | 80* | | 23 * | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (0.00962) U | 0.482 | 104 | (82-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.478 | 103 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dibromochloromethane | MS | (0.00962) U | 0.467 | 101 | (84-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.494 | 107 | | 6 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dibromomethane | MS | (0.00962) U | 0.476 | 103 | (80-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.489 | 106 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dichlorodifluoromethane | MS | (0.00962) U | 0.322 | 70 | (43-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.380 | 82 | | 17 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Ethylbenzene | MS | 0.0515 | 0.496 | 96 | (87-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.565 | 111 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Hexachlorobutadiene | MS | (0.00962) U | 0.506 | 110 | (74-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.553 | 120 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Isopropylbenzene (Cumene) | MS | 0.00941J | 0.468 | 99 | (89-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.531 | 113 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Methylene chloride | MS | 0.0199J | 0.433 | 89 | (63-137) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 92 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Methyl-t-butyl ether | MS | (0.00962) U | 0.729 | 105 | (76-133) | | | 0.693 mg/Kg | 07/06/2010 |
| | MSD | | 0.742 | 107 | | 2 | (< 20) | 0.693 mg/Kg | 07/06/2010 |
| Naphthalene | MS | 0.0318 | 0.495 | 100 | (73-131) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.536 | 109 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| n-Butylbenzene | MS | (0.00962) U | 0.469 | 102 | (82-127) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.521 | 113 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| n-Propylbenzene | MS | 0.0134J | 0.454 | 95 | (82-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.488 | 103 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| o-Xylene | MS | 0.114 | 0.556 | 96 | (89-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.613 | 108 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| P & M -Xylene | MS | 0.182 | 1.11 | 100 | (88-121) | | | 0.924 mg/Kg | 07/06/2010 |
| | MSD | | 1.20 | 111 | | 8 | (< 20) | 0.924 mg/Kg | 07/06/2010 |
| sec-Butylbenzene | MS | (0.00962) U | 0.442 | 96 | (84-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.521 | 113 | | 16 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Styrene | MS | (0.00962) U | 0.462 | 100 | (91-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.514 | 111 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| tert-Butylbenzene | MS | (0.00962) U | 0.446 | 96 | (82-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.490 | 106 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Tetrachloroethene | MS | (0.00962) U | 0.436 | 94 | (82-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.489 | 106 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Toluene | MS | 0.0696 | 0.554 | 105 | (87-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.612 | 117 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| trans-1,2-Dichloroethene | MS | (0.00962) U | 0.443 | 96 | (79-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.512 | 111 | | 15 | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/08/2010 16:46
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|-------------|-------|-----|------------|----|---------|-------------|------------|
| trans-1,3-Dichloropropene | MS | (0.00962) U | 0.488 | 106 | (86-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.482 | 104 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Trichloroethene | MS | (0.00962) U | 0.440 | 95 | (77-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.499 | 108 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Trichlorofluoromethane | MS | (0.00962) U | 0.363 | 79 | (64-139) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.413 | 89 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Vinyl chloride | MS | (0.00962) U | 0.375 | 81 | (67-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.422 | 91 | | 12 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Xylenes (total) | MS | 0.296 | 1.66 | 99 | (89-120) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.82 | 110 | | 9 | (< 20) | 1.39 mg/Kg | 07/06/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|-------|-----|------------|----|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 0.451 | 98 | (69-132) | | | | 07/06/2010 |
| | MSD | | 0.456 | 99 | | 1 | | | 07/06/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 1.07 | 99 | (65-144) | | | | 07/06/2010 |
| | MSD | | 1.18 | 109 | | 10 | | | 07/06/2010 |
| Toluene-d8 <surr> | MS | | 0.460 | 100 | (84-124) | | | | 07/06/2010 |
| | MSD | | 0.506 | 109 | | 10 | | | 07/06/2010 |

Batch VMS11350
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA




| 1 CLIENT: <u>Shannon & Wilson</u> | | | | SGS Reference #: _____ | | | | page <u>1</u> of <u>1</u> | | | | | |
|---|-----------------------|-------------------------------|----------------------|--|---|--|----------|---|----------------|---|--|--------------------|--|
| CONTACT: <u>Andrea Carlson</u> | | PHONE NO: <u>907-479-0800</u> | | # CONTAINERS | | SAMPLE TYPE C- COMP G- GRAB MI- Multi Incremental Samples | | Preservatives Used Analysis Required 3 | | SVOC VOC Arsenic, Cadmium, Chromium, Lead | | REMARKS/ LOC ID | |
| PROJECT: <u>ADDT&PF Inj. Wells</u> | | SITE/PWSID#: _____ | | | | | | | | | | | |
| REPORTS TO: <u>S&W</u> | | EMAIL: _____ | | | | | | | | | | | |
| INVOICE TO: <u>S&W</u> | | QUOTE #: <u>32-1-17368</u> | | | | | | | | | | | |
| LAB NO. | SAMPLE IDENTIFICATION | DATE | TIME | MATRIX/MATRIX CODE | # | TYPE | PRESERV. | ANALYSIS | REMARKS/LOC ID | | | | |
| ① A, B, C | 7368-063010-TRIMS | 6-30-10 | 13:46 | Soil | 3 | Grab | X | X | X | | | | |
| ② A | TRIP BLANK | | | | | | | X | | | | | |
| RUSH | | | | | | | | | | | | | |
| 5 Collected/Relinquished By: (1) <u>[Signature]</u> | | Date: <u>7-2-10</u> | Time: <u>10:00am</u> | Received By: <u>7/2/10 Carmm Beene 1000am</u> | | DOD Project? YES NO Cooler ID _____ Cooler Temp °C _____ | | Special Deliverable Requirements: | | | | | |
| Relinquished By: (2) <u>Carmm Beene</u> | | Date: <u>7/2/10</u> | Time: <u>1508</u> | Received By: _____ | | Requested Turnaround Time and-or Special Instructions: <u>RUSH 3-day use trip blank for both COCs</u> | | | | | | | |
| Relinquished By: (3) _____ | | Date: _____ | Time: _____ | Received By: _____ | | Temperature Blank °C: <u>2.7</u> | | Therm # <u>700</u> | | Chain of Custody Seal: (Circle) | | | |
| Relinquished By: (4) _____ | | Date: <u>7/3/10</u> | Time: <u>16:20</u> | Received For Laboratory By: <u>[Signature]</u> | | or Ambient <input type="checkbox"/> | | INTACT BROKEN ABSENT | | | | | |



SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|---|--|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: _____ @ _____ w/ Therm. ID: <u>fold</u> Cooler ID: _____ @ _____ w/ Therm. ID: _____ Cooler ID: _____ @ _____ w/ Therm. ID: _____ Cooler ID: _____ @ _____ w/ Therm. ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | Yes No <u>N/A</u> Note airbill/tracking # See Attached or N/A | |
| Delivery method (specify all that apply): Client <input checked="" type="radio"/> USPS Alert Courier Road Runner AK-Air <input type="radio"/> Lynden Cartile ERA FedEx <input type="radio"/> UPS NAC PenAir Other: _____ | | |
| * For samples received with payment, note amount (\$) and cash / check / CC (circle one). * For samples received in FBKS, ANCH staff will verify all criteria and be initialed. Do samples match COC (i.e., sample IDs, dates, etc.) collected? Are analyses requested unambiguous? Were samples in good condition (no leaks/cracks/breakages)? Packaging material used (specify all that apply): <u>Bubble wrap</u> Separate plastic bags Vermiculite Other: _____ | Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> | SRF Initiated by: <u>TR</u> <u>OR</u> N/A N/A |
| Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB? Were proper containers (type/mass/volume/preservative) used? Were the bottles provided by SGS? (Note apparent exceptions.) Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F1066) for documentation.</i> | Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| For RUSH or SHORT HOLD TIME samples, were the COC & the SRF flagged, bottles flagged (e.g., stickers) and lab notified? For client requested, site-specific QC (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly? For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? Was PEER REVIEW of sample numbering completed (i.e., compare W/O# on containers to COC, container ID on containers to COC, each container had a unique container ID)? Was the W/O# recorded in Front Counter/Sample Receiving log? | Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u> | RUSH DUE 7/8 CAJ |
| For any questions answered "NO," was the PM notified? Additional notes (if applicable): <u>TR also # 1103930-3A</u> <u>AKA</u> | Yes No <u>N/A</u> | Peer Reviewed by: <u>AKA</u> PM = <u>N/A</u> |

1103929


SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

| | | |
|--|--|---|
| Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff (attached). | Yes <input type="radio"/> No <input checked="" type="radio"/> N/A | Use space below for additional notes... |
| Review Criteria: | | |
| Were custody seals intact? Note # & location: COC accompanied samples? | Condition: Yes <input checked="" type="radio"/> No <input type="radio"/> N/A Yes <input checked="" type="radio"/> No <input type="radio"/> N/A Yes <input type="radio"/> No <input type="radio"/> N/A | Comments/Action Taken: |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: 1 @ 07 w/ Therm.ID: 13D Cooler ID: @ @ w/ Therm.ID: _____ Cooler ID: @ @ w/ Therm.ID: _____ Cooler ID: @ @ w/ Therm.ID: _____ Cooler ID: @ @ w/ Therm.ID: _____ Note: If non-compliant, use form FS-0029 to document affected samples/analyses. If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | Yes <input type="radio"/> No <input checked="" type="radio"/> N/A | |
| Delivery method: Other: | Lydena | |
| Completed by: | Garry O... 713110 | |

| WO# (7 digits) | | Sample # · Sample # | Container ID · Container ID | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|---------|---------------------------|-----------------------------------|--------|------------|---------------------------|-------------|----------------------|---|
| SAMPLE ID | | CONTAINERS | | TYPE | CONTAINERS | | ANALYSIS | Type comments below: | |
| 1103929 | 001 001 | A | A | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103929 | 001 001 | B | B | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103929 | 001 001 | C | C | 2 Soil | | MeOH+BFB * | S_GROVOC | | |
| 1103929 | 002 002 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GROVOC | | |

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 20, 2010

Laboratory Report Date: July 8, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103929

ADEC File Number: 140.26.017

(NOTE: *NA* = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA / **Yes** / No

Comments: *Samples were transferred from SGS-Fairbanks to SGS-Anchorage.*

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? *NA* / **Yes** / *No*
Comments:
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / *No*
Comments: *No problems were noted by laboratory.*
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **NA** / **Yes** / *No*
Comments: *No discrepancies were indicated by laboratory.*
- e. Data quality or usability affected? Explain. **NA**
Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / *No*
Comments:
- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**
Comments: *For MS/MSD discrepancies see section 6.b. ICV/CCB recoveries of several VOCs and SVOCs are biased high.*
- c. Were corrective actions documented? **None Noted** / **Yes**
Comments:
- d. What is the effect on data quality/usability, according to the case narrative? *NA*
Comments: *The analytes with ICV/CCV discrepancies were not detected above their PQLs in associated project samples.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / *No*
Comments:
- b. All applicable holding times met? **Yes** / *No*
Comments:
- c. All soils reported on a dry-weight basis? *NA* / **Yes** / *No*
Comments:
- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / **No**
Comments: *The PQLs for multiple VOCs and SVOCs greater than the respective*

cleanup levels.

- e. Data quality or usability affected? Explain. *NA*
Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) *NA* / **Yes** / No

Comments: *LCS only. MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? *NA* / **Yes** / No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) **Yes** / **No**

Comments: *MS/MSD recoveries of metals arsenic and lead, and MSD recovery of VOC cis-1,2-dichloroethene are outside QC criteria.*

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) Yes / **No**

Comments: *MS/MSD RPDs of arsenic and cis-1,2-dichloroethene are outside QC criteria.*

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**
Comments: *The RPD for arsenic is accepted based on acceptable sample/duplicate RPD and cis-1,2-dichloroethene was not detected above the reporting limit in the associated sample.*

- vi. Do the affected samples(s) have data flags? NA / Yes / **No**

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- vii. Data quality or usability affected? Explain. NA

Comments: *The case narrative states that the post-digestion spike for the MS/MSD recoveries of arsenic and lead were successful; the LCS recoveries of arsenic and lead were within QC criteria; the project sample accuracy for these metals is considered usable. The case narrative states to refer to the LCS for accuracy of the recovery of cis-1,2-dichloroethene; the LCS recovery of this analyte is within QC criteria. The case narrative states that the sample/duplicate RPD for arsenic is within QC criteria; the project sample precision of arsenic is considered acceptable. Cis-1,2-dichloroethene was not detected above the PQL in the project sample.*

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? NA / **Yes** / No

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) NA / **Yes** / No

Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

i. One trip blank reported per matrix, analysis and cooler? **NA** / **Yes** / **No**
Comments:

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **NA** / **Yes** / **No** (if no explain):

iii. All results less than PQL? **NA** / **Yes** / **No**
Comments:

iv. If above PQL, what samples are affected? **NA**
Comments:

v. Data quality or usability affected? Explain. **NA**
Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / **No**
Comments: *A field duplicate for this project was submitted with a separate work order.*

ii. Were the field duplicates submitted blind to the lab? **NA** / **Yes** / **No**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) **NA** / **Yes** / **No**
Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments:

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

NA / **Yes** / **No**
Comments: *An EB was not included in the scope for this project.*

i. All results less than PQL? **NA** / **Yes** / **No**
Comments:

Work Order Number: 1103929

ii. If results are above PQL, what samples are affected? **NA**
Comments:

iii. Data quality or usability affected? Explain. **NA**
Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

a. Are they defined and appropriate? **NA / Yes / No**
Comments: *Data flags/qualifiers are on page following case narrative.*



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: ADOT&PF Inj. Wells
Client: Shannon & Wilson-Fairbanks
SGS Work Order: 1103930

Released by:

Contents:

Cover Page
Case Narrative
Final Report Pages
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Case Narrative

Customer: SHANFBK

Shannon & Wilson-Fairbanks

Project: 1103930

ADOT&PF Inj. Wells

Refer to the sample receipt form for information on sample condition.

Revised Report: COC was not submitted with original report. New report generated with COC attached.

971529 MS

1103929001MS

6020 - MS/MSD recoveries for arsenic and lead are outside of acceptance criteria. Post-digestion spike was successful.

971530 MSD

1103929001MSD

6020 - MS/MSD recoveries for arsenic and lead are outside of acceptance criteria. Post-digestion spike was successful.

6020 - RPD for arsenic is outside of acceptance criteria. Sample/duplicate RPD is within acceptance criteria.

971864 MSD

971862MSD

8260B - MS/MSD does not meet RPD criteria for cis-1,2-dichloroethene. This analyte was not detected above the LOQ in the associated samples.

8260B - MSD recovery for cis-1,2-dichloroethene does not meet QC criteria (biased high). Refer to LCS for accuracy.

971893 CCV

VMS/11350]

8260B - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

972173 CCV

XMS/5504

8270D - CCV recovery for 4-nitrophenol does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.



Laboratory Analytical Report

Client: **Shannon & Wilson-Fairbanks**
2055 Hill Road
Fairbanks, AK 997095244

Attn: **Andrea Carlson**
T: (907)479-0600 F:(907)479-5691
ac@shanwil.com

Project: **ADOT&PF Inj. Wells**

Workorder No.: **1103930**

Certification:

This data package is in compliance with the terms and conditions of the contract, both technically and for completeness, unless otherwise noted on the sample data sheet(s) and/or case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory. If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Carmon Beene

Project Manager

Contents (Bookmarked in PDF):

- Cover Page
- Glossary
- Sample Summary Forms
- Case Narrative
- Sample Results Forms
- Batch Summary Forms (by method)
- Quality Control Summary Forms (by method)
- Chain of Custody/Sample Receipt Forms
- Attachments (if applicable)

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

| | |
|--------|--|
| * | The analyte has exceeded allowable regulatory or control limits. |
| ! | Surrogate out of control limits. |
| B | Indicates the analyte is found in a blank associated with the sample. |
| CCV | Continuing Calibration Verification |
| CL | Control Limit |
| D | The analyte concentration is the result of a dilution. |
| DF | Dilution Factor |
| DL | Detection Limit (i.e., maximum method detection limit) |
| E | The analyte result is above the calibrated range. |
| F | Indicates value that is greater than or equal to the DL |
| GT | Greater Than |
| ICV | Initial Calibration Verification |
| J | The quantitation is an estimation. |
| JL | The analyte was positively identified, but the quantitation is a low estimation. |
| LCS(D) | Laboratory Control Spike (Duplicate) |
| LOD | Limit of Detection (i.e., 2xDL) |
| LOQ | Limit of Quantitation (i.e., reporting or practical quantitation limit) |
| LT | Less Than |
| M | A matrix effect was present. |
| MB | Method Blank |
| MS(D) | Matrix Spike (Duplicate) |
| ND | Indicates the analyte is not detected. |
| Q | QC parameter out of acceptance range. |
| R | Rejected |
| RL | Reporting Limit |
| RPD | Relative Percent Difference |
| U | Indicates the analyte was analyzed for but not detected. |

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.



SAMPLE SUMMARY

Print Date: 7/15/2010 12:44 pm

Client Name: Shannon & Wilson-Fairbanks
Project Name: ADOT&PF Inj. Wells
Workorder No.: 1103930

Analytical Methods

| <u>Method Description</u> | <u>Analytical Method</u> |
|--|--------------------------|
| Metals by ICP-MS (S) | SW6020 |
| Percent Solids SM2540G | SM20 2540G |
| SW846 8270 Semi-Volatiles by GC/MS (S) | SW8270D |
| VOC 8260 (S) Field Extracted | SW8260B |

Sample ID Cross Reference

| <u>Lab Sample ID</u> | <u>Client Sample ID</u> |
|----------------------|-------------------------|
| 1103930001 | 7368-070110-Birch 1 |
| 1103930002 | 7368-070110-Birch 2 |
| 1103930003 | Trip Blank |



Detectable Results Summary

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 7.06 | mg/Kg |
| Chromium | 11.7 | mg/Kg |
| Lead | 13.2 | mg/Kg |

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|------------------|---------------|--------------|
| Arsenic | 2.73 | mg/Kg |
| Cadmium | 0.399 | mg/Kg |
| Chromium | 6.66 | mg/Kg |
| Lead | 6.32 | mg/Kg |

Volatile Gas Chromatography/Mass Spectroscopy

| | | |
|------------------------|--------|-------|
| 1,2,4-Trichlorobenzene | 0.0464 | mg/Kg |
| Tetrachloroethene | 0.0239 | mg/Kg |
| 1,3-Dichlorobenzene | 0.0575 | mg/Kg |
| 1,2,3-Trichlorobenzene | 0.0215 | mg/Kg |



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Arsenic | 7.06 | 1.05 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Cadmium | 0.209 U | 0.209 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Chromium | 11.7 | 0.419 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Lead | 13.2 | 0.209 | mg/Kg | 10 | MMS6513 | MXX23178 | |

Batch Information

Analytical Batch: MMS6513

Analytical Method: SW6020

Analysis Date/Time: 07/07/10 20:59

Dilution Factor: 10

Prep Batch: MXX23178

Prep Method: SW3050B

Prep Date/Time: 07/06/10 12:15

Initial Prep Wt./Vol.: 1.056 g

Prep Extract Vol.: 50 mL

Container ID:1103930001-A

Analyst: NRB

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1,1-Trichloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2,2-Tetrachloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2-Trichloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloropropene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichloropropane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trichlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trimethylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromo-3-chloropropane | 0.132 U | 0.132 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromoethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloropropane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,3,5-Trimethylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichloropropane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 1,4-Dichlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 2,2-Dichloropropane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 2-Butanone (MEK) | 0.331 U | 0.331 | mg/Kg | 1 | VMS11350 | | |
| 2-Chlorotoluene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 2-Hexanone | 0.331 U | 0.331 | mg/Kg | 1 | VMS11350 | | |
| 4-Chlorotoluene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 4-Isopropyltoluene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.331 U | 0.331 | mg/Kg | 1 | VMS11350 | | |
| Benzene | 0.0165 U | 0.0165 | mg/Kg | 1 | VMS11350 | | |
| Bromobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Bromochloromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Bromodichloromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Bromoform | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Bromomethane | 0.265 U | 0.265 | mg/Kg | 1 | VMS11350 | | |
| Carbon disulfide | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Carbon tetrachloride | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Chlorobenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| Chloroethane | 0.265 U | 0.265 | mg/Kg | 1 | VMS11350 | | |
| Chloroform | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Chloromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| cis-1,2-Dichloroethene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| cis-1,3-Dichloropropene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Dibromochloromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Dibromomethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Dichlorodifluoromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Ethylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Hexachlorobutadiene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Isopropylbenzene (Cumene) | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Methylene chloride | 0.132 U | 0.132 | mg/Kg | 1 | VMS11350 | | |
| Methyl-t-butyl ether | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Naphthalene | 0.0662 U | 0.0662 | mg/Kg | 1 | VMS11350 | | |
| n-Butylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| n-Propylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| o-Xylene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| P & M -Xylene | 0.0662 U | 0.0662 | mg/Kg | 1 | VMS11350 | | |
| sec-Butylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Styrene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| tert-Butylbenzene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Tetrachloroethene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Toluene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| trans-1,2-Dichloroethene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| trans-1,3-Dichloropropene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Trichloroethene | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Trichlorofluoromethane | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Vinyl chloride | 0.0331 U | 0.0331 | mg/Kg | 1 | VMS11350 | | |
| Xylenes (total) | 0.0993 U | 0.0993 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane-D4 <surrogate> | 101 | 69-132 | % | 1 | VMS11350 | | |
| 4-Bromofluorobenzene <surrogate> | 99.1 | 65-144 | % | 1 | VMS11350 | | |
| Toluene-d8 <surrogate> | 113 | 84-124 | % | 1 | VMS11350 | | |



Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11350 | | | | | | Initial Prep Wt./Vol.: 49.728 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/06/10 08:44 | | | | | | Container ID:1103930001-C | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |



Client Sample ID: 7368-070110-Birch 1

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| 1,2,4-Trichlorobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,2-Dichlorobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,3-Dichlorobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,4-Dichlorobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,5-Trichlorophenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,6-Trichlorophenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dichlorophenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dimethylphenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dinitrophenol | 3.29 U | 3.29 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dinitrotoluene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,6-Dinitrotoluene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Chloronaphthalene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Chlorophenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methyl-4,6-dinitrophenol | 2.20 U | 2.20 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methylnaphthalene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methylphenol (o-Cresol) | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Nitroaniline | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Nitrophenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3&4-Methylphenol (p&m-Cresol) | 1.10 U | 1.10 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3,3-Dichlorobenzidine | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3-Nitroaniline | 0.549 U | 0.549 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Bromophenyl-phenylether | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chloro-3-methylphenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chloroaniline | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chlorophenyl-phenylether | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Nitroaniline | 3.29 U | 3.29 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Nitrophenol | 1.10 U | 1.10 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Acenaphthene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Acenaphthylene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Aniline | 2.20 U | 2.20 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Anthracene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Azobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo(a)Anthracene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[a]pyrene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[b]Fluoranthene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[g,h,i]perylene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: 7368-070110-Birch 1

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Benzo[k]fluoranthene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzoic acid | 1.65 U | 1.65 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzyl alcohol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2chloro1methylethyl)Ether | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2-Chloroethoxy)methane | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2-Chloroethyl)ether | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| bis(2-Ethylhexyl)phthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Butylbenzylphthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Chrysene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dibenzo[a,h]anthracene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dibenzofuran | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Diethylphthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dimethylphthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Di-n-butylphthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| di-n-Octylphthalate | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Fluoranthene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Fluorene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorobutadiene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorocyclopentadiene | 0.769 U | 0.769 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachloroethane | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Indeno[1,2,3-c,d] pyrene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Isophorone | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Naphthalene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Nitrobenzene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitrosodimethylamine | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitroso-di-n-propylamine | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitrosodiphenylamine | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Pentachlorophenol | 2.20 U | 2.20 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Phenanthrene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Phenol | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Pyrene | 0.275 U | 0.275 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,6-Tribromophenol <surr> | 86.9 | 47-125 | % | 1 | XMS5504 | XXX22965 | |
| 2-Fluorobiphenyl <surr> | 86.5 | 45-105 | % | 1 | XMS5504 | XXX22965 | |
| 2-Fluorophenol <surr> | 73.4 | 41-84 | % | 1 | XMS5504 | XXX22965 | |
| Nitrobenzene-d5 <surr> | 62.9 | 37-100 | % | 1 | XMS5504 | XXX22965 | |
| Phenol-d6 <surr> | 74.4 | 48-94 | % | 1 | XMS5504 | XXX22965 | |



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|---------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Terphenyl-d14 <sur> | 99 | 50-120 | % | 1 | XMS5504 | XXX22965 | |

Batch Information

Analytical Batch: XMS5504

Analytical Method: SW8270D

Analysis Date/Time: 07/08/10 14:52

Dilution Factor: 1

Prep Batch: XXX22965

Prep Method: SW3550C

Prep Date/Time: 07/06/10 10:30

Initial Prep Wt./Vol.: 22.655 g

Prep Extract Vol.: 1 mL

Container ID:1103930001-A

Analyst: JDH



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 1**

SGS Ref. #: 1103930001

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 90.4

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Solids

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Total Solids | 90.4 | | % | 1 | SPT8175 | | |

Batch Information

Analytical Batch: SPT8175

Analytical Method: SM20 2540G

Analysis Date/Time: 07/06/10 18:33

Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1103930001-A

Analyst: SH



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Metals by ICP/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Arsenic | 2.73 | 0.987 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Cadmium | 0.399 | 0.197 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Chromium | 6.66 | 0.395 | mg/Kg | 10 | MMS6513 | MXX23178 | |
| Lead | 6.32 | 0.197 | mg/Kg | 10 | MMS6513 | MXX23178 | |

Batch Information

Analytical Batch: MMS6513

Analytical Method: SW6020

Analysis Date/Time: 07/07/10 21:01

Dilution Factor: 10

Prep Batch: MXX23178

Prep Method: SW3050B

Prep Date/Time: 07/06/10 12:15

Initial Prep Wt./Vol.: 1.072 g

Prep Extract Vol.: 50 mL

Container ID:1103930002-A

Analyst: NRB

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1,1-Trichloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2,2-Tetrachloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2-Trichloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloropropene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichlorobenzene | 0.0215 | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichloropropane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trichlorobenzene | 0.0464 | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trimethylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromo-3-chloropropane | 0.0730 U | 0.0730 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromoethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichlorobenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloropropane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,3,5-Trimethylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichlorobenzene | 0.0575 | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichloropropane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 1,4-Dichlorobenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 2,2-Dichloropropane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 2-Butanone (MEK) | 0.183 U | 0.183 | mg/Kg | 1 | VMS11350 | | |
| 2-Chlorotoluene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 2-Hexanone | 0.183 U | 0.183 | mg/Kg | 1 | VMS11350 | | |
| 4-Chlorotoluene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 4-Isopropyltoluene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.183 U | 0.183 | mg/Kg | 1 | VMS11350 | | |
| Benzene | 0.00913 U | 0.00913 | mg/Kg | 1 | VMS11350 | | |
| Bromobenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Bromochloromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Bromodichloromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Bromoform | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Bromomethane | 0.146 U | 0.146 | mg/Kg | 1 | VMS11350 | | |
| Carbon disulfide | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Carbon tetrachloride | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Chlorobenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| Chloroethane | 0.146 U | 0.146 | mg/Kg | 1 | VMS11350 | | |
| Chloroform | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Chloromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| cis-1,2-Dichloroethene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| cis-1,3-Dichloropropene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Dibromochloromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Dibromomethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Dichlorodifluoromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Ethylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Hexachlorobutadiene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Isopropylbenzene (Cumene) | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Methylene chloride | 0.0730 U | 0.0730 | mg/Kg | 1 | VMS11350 | | |
| Methyl-t-butyl ether | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Naphthalene | 0.0365 U | 0.0365 | mg/Kg | 1 | VMS11350 | | |
| n-Butylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| n-Propylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| o-Xylene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| P & M -Xylene | 0.0365 U | 0.0365 | mg/Kg | 1 | VMS11350 | | |
| sec-Butylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Styrene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| tert-Butylbenzene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Tetrachloroethene | 0.0239 | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Toluene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| trans-1,2-Dichloroethene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| trans-1,3-Dichloropropene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Trichloroethene | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Trichlorofluoromethane | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Vinyl chloride | 0.0183 U | 0.0183 | mg/Kg | 1 | VMS11350 | | |
| Xylenes (total) | 0.0548 U | 0.0548 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane-D4 <surr> | 105 | 69-132 | % | 1 | VMS11350 | | |
| 4-Bromofluorobenzene <surr> | 108 | 65-144 | % | 1 | VMS11350 | | |
| Toluene-d8 <surr> | 120 | 84-124 | % | 1 | VMS11350 | | |



Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11350 | | | | | | Initial Prep Wt./Vol.: 86.122 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/06/10 09:18 | | | | | | Container ID:1103930002-C | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-----------------------------|-----------------------|-------------------|
| 1,2,4-Trichlorobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,2-Dichlorobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,3-Dichlorobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 1,4-Dichlorobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,5-Trichlorophenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,6-Trichlorophenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dichlorophenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dimethylphenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dinitrophenol | 19.0 U | 19.0 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4-Dinitrotoluene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,6-Dinitrotoluene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Chloronaphthalene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Chlorophenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methyl-4,6-dinitrophenol | 12.7 U | 12.7 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methylnaphthalene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Methylphenol (o-Cresol) | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Nitroaniline | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2-Nitrophenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3&4-Methylphenol (p&m-Cresol) | 6.33 U | 6.33 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3,3-Dichlorobenzidine | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 3-Nitroaniline | 3.16 U | 3.16 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Bromophenyl-phenylether | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chloro-3-methylphenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chloroaniline | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Chlorophenyl-phenylether | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Nitroaniline | 19.0 U | 19.0 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 4-Nitrophenol | 6.33 U | 6.33 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Acenaphthene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Acenaphthylene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Aniline | 12.7 U | 12.7 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Anthracene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Azobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo(a)Anthracene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[a]pyrene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[b]Fluoranthene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzo[g,h,i]perylene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: 7368-070110-Birch 2

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-------------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Benzo[k]fluoranthene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzoic acid | 9.49 U | 9.49 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Benzyl alcohol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2chloro1methylethyl)Ether | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2-Chloroethoxy)methane | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Bis(2-Chloroethyl)ether | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| bis(2-Ethylhexyl)phthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Butylbenzylphthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Chrysene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dibenzo[a,h]anthracene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dibenzofuran | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Diethylphthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Dimethylphthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Di-n-butylphthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| di-n-Octylphthalate | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Fluoranthene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Fluorene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorobutadiene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachlorocyclopentadiene | 4.43 U | 4.43 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Hexachloroethane | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Indeno[1,2,3-c,d] pyrene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Isophorone | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Naphthalene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Nitrobenzene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitrosodimethylamine | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitroso-di-n-propylamine | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| N-Nitrosodiphenylamine | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Pentachlorophenol | 12.7 U | 12.7 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Phenanthrene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Phenol | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| Pyrene | 1.58 U | 1.58 | mg/Kg | 1 | XMS5504 | XXX22965 | |
| 2,4,6-Tribromophenol <surr> | 94.2 | 47-125 | % | 1 | XMS5504 | XXX22965 | |
| 2-Fluorobiphenyl <surr> | 90.3 | 45-105 | % | 1 | XMS5504 | XXX22965 | |
| 2-Fluorophenol <surr> | 73.6 | 41-84 | % | 1 | XMS5504 | XXX22965 | |
| Nitrobenzene-d5 <surr> | 59 | 37-100 | % | 1 | XMS5504 | XXX22965 | |
| Phenol-d6 <surr> | 78.9 | 48-94 | % | 1 | XMS5504 | XXX22965 | |



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Semivolatile Organic GC/MS

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|---------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Terphenyl-d14 <sur> | 105 | 50-120 | % | 1 | XMS5504 | XXX22965 | |

Batch Information

Analytical Batch: XMS5504

Analytical Method: SW8270D

Analysis Date/Time: 07/08/10 15:10

Dilution Factor: 1

Prep Batch: XXX22965

Prep Method: SW3550C

Prep Date/Time: 07/06/10 10:30

Initial Prep Wt./Vol.: 22.571 g

Prep Extract Vol.: 6 mL

Container ID:1103930002-A

Analyst: JDH



Shannon & Wilson-Fairbanks

Print Date: 7/15/2010 12:44 pm

Client Sample ID: **7368-070110-Birch 2**

SGS Ref. #: 1103930002

Project ID: ADOT&PF Inj. Wells

Matrix: Soil/Solid (dry weight)

Percent Solids: 94.5

Collection Date/Time: 07/01/10 10:59

Receipt Date/Time: 07/03/10 16:20

Solids

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Total Solids | 94.5 | | % | 1 | SPT8175 | | |

Batch Information

Analytical Batch: SPT8175

Analytical Method: SM20 2540G

Analysis Date/Time: 07/06/10 18:33

Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL

Container ID:1103930002-A

Analyst: SH



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103930003
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 07/01/10 09:09
Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| 1,1,1,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,1-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2,2-Tetrachloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1,2-Trichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,1-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,3-Trichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2,4-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromo-3-chloropropane | 0.100 U | 0.100 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dibromoethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3,5-Trimethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,3-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 1,4-Dichlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2,2-Dichloropropane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2-Butanone (MEK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| 2-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 2-Hexanone | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| 4-Chlorotoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 4-Isopropyltoluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.251 U | 0.251 | mg/Kg | 1 | VMS11350 | | |
| Benzene | 0.0125 U | 0.0125 | mg/Kg | 1 | VMS11350 | | |
| Bromobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromodichloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromoform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Bromomethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11350 | | |
| Carbon disulfide | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Carbon tetrachloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Chlorobenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103930003
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 07/01/10 09:09

Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|-----------------------------|---------------|---------------|--------------|-----------|-------------------------|-------------------|-------------------|
| Chloroethane | 0.201 U | 0.201 | mg/Kg | 1 | VMS11350 | | |
| Chloroform | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Chloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| cis-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| cis-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dibromochloromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dibromomethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Dichlorodifluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Ethylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Hexachlorobutadiene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Isopropylbenzene (Cumene) | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Methylene chloride | 0.100 U | 0.100 | mg/Kg | 1 | VMS11350 | | |
| Methyl-t-butyl ether | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Naphthalene | 0.0502 U | 0.0502 | mg/Kg | 1 | VMS11350 | | |
| n-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| n-Propylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| o-Xylene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| P & M -Xylene | 0.0502 U | 0.0502 | mg/Kg | 1 | VMS11350 | | |
| sec-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Styrene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| tert-Butylbenzene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Tetrachloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Toluene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| trans-1,2-Dichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| trans-1,3-Dichloropropene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Trichloroethene | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Trichlorofluoromethane | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Vinyl chloride | 0.0251 U | 0.0251 | mg/Kg | 1 | VMS11350 | | |
| Xylenes (total) | 0.0752 U | 0.0752 | mg/Kg | 1 | VMS11350 | | |
| 1,2-Dichloroethane-D4 <sur> | 105 | 69-132 | % | 1 | VMS11350 | | |
| 4-Bromofluorobenzene <sur> | 97.2 | 65-144 | % | 1 | VMS11350 | | |
| Toluene-d8 <sur> | 113 | 84-124 | % | 1 | VMS11350 | | |



Client Sample ID: **Trip Blank**
SGS Ref. #: 1103930003
Project ID: ADOT&PF Inj. Wells
Matrix: Soil/Solid (dry weight)

Collection Date/Time: 07/01/10 09:09
Receipt Date/Time: 07/03/10 16:20

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>LOQ/CL</u> | <u>Units</u> | <u>DF</u> | <u>Analytical Batch</u> | <u>Prep Batch</u> | <u>Qualifiers</u> |
|------------------------------------|---------------|---------------|--------------|-----------|-------------------------|---------------------------------|-------------------|
| Batch Information | | | | | | | |
| Analytical Batch: VMS11350 | | | | | | Initial Prep Wt./Vol.: 49.849 g | |
| Analytical Method: SW8260B | | | | | | | |
| Analysis Date/Time: 07/06/10 04:48 | | | | | | Container ID:1103930003-A | |
| Dilution Factor: 1 | | | | | | Analyst: DSH | |



SGS Ref.# 971398 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch XXX22965
Method SW3550C
Date 07/06/2010

QC results affect the following production samples:
 1103930001, 1103930002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------------------------------|---------|--------|--------|-------|---------------|
| Semivolatile Organic GC/MS | | | | | |
| 1,2,4-Trichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,2-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,3-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 1,4-Dichlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4,5-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4,6-Trichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dichlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dimethylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,4-Dinitrophenol | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/07/10 |
| 2,4-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2,6-Dinitrotoluene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Chloronaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Chlorophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Methyl-4,6-dinitrophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| 2-Methylnaphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Methylphenol (o-Cresol) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Nitroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 2-Nitrophenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 3&4-Methylphenol (p&m-Cresol) | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| 3,3-Dichlorobenzidine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 3-Nitroaniline | 0.300 U | 0.500 | 0.150 | mg/Kg | 07/07/10 |
| 4-Bromophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chloro-3-methylphenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chloroaniline | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Chlorophenyl-phenylether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| 4-Nitroaniline | 1.88 U | 3.00 | 0.940 | mg/Kg | 07/07/10 |
| 4-Nitrophenol | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| Acenaphthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Acenaphthylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Aniline | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Azobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo(a)Anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[a]pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[b]Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzo[g,h,i]perylene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |



SGS Ref.# 971398 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch Method XXX22965
Date SW3550C
 07/06/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|--------------------------------|---------|-------|--------|-------|----------|
| Benzo[k]fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Benzoic acid | 1.50 U | 1.50 | 0.750 | mg/Kg | 07/07/10 |
| Benzyl alcohol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2chloro 1methylethyl)Ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2-Chloroethoxy)methane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Bis(2-Chloroethyl)ether | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| bis(2-Ethylhexyl)phthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Butylbenzylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Chrysene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dibenzo[a,h]anthracene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dibenzofuran | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Diethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Dimethylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Di-n-butylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| di-n-Octylphthalate | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Fluoranthene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Fluorene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorobutadiene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Hexachlorocyclopentadiene | 0.400 U | 0.700 | 0.200 | mg/Kg | 07/07/10 |
| Hexachloroethane | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Indeno[1,2,3-c,d] pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Isophorone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Naphthalene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Nitrobenzene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitrosodimethylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitroso-di-n-propylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| N-Nitrosodiphenylamine | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Pentachlorophenol | 1.24 U | 2.00 | 0.620 | mg/Kg | 07/07/10 |
| Phenanthrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Phenol | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |
| Pyrene | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/07/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 2,4,6-Tribromophenol <surr> | 87 | 47-125 | | % | 07/07/10 |
| 2-Fluorobiphenyl <surr> | 78.4 | 45-105 | | % | 07/07/10 |
| 2-Fluorophenol <surr> | 75.1 | 41-84 | | % | 07/07/10 |
| Nitrobenzene-d5 <surr> | 71 | 37-100 | | % | 07/07/10 |
| Phenol-d6 <surr> | 78.9 | 48-94 | | % | 07/07/10 |



SGS Ref.# 971398 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch XXX22965
Method SW3550C
Date 07/06/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic GC/MS

| | | | | | |
|----------------------|------------------|--------|--|---|----------|
| Terphenyl-d14 <surr> | 99.1 | 50-120 | | % | 07/07/10 |
| Batch | XMS5502 | | | | |
| Method | SW8270D | | | | |
| Instrument | HP 6890/5973 SSA | | | | |



SGS Ref.# 971527 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch MXX23178
Method SW3050B
Date 07/06/2010

QC results affect the following production samples:
1103930001, 1103930002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Metals by ICP/MS

| | | | | | |
|----------|---------|-------|--------|-------|----------|
| Arsenic | 0.620 U | 1.00 | 0.310 | mg/Kg | 07/07/10 |
| Cadmium | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/07/10 |
| Chromium | 0.240 U | 0.400 | 0.120 | mg/Kg | 07/07/10 |
| Lead | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/07/10 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971650 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch
Method
Date

QC results affect the following production samples:
1103930001, 1103930002

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Solids

| | | | | | |
|--------------|------------|--|--|---|----------|
| Total Solids | 100 | | | % | 07/06/10 |
| Batch | SPT8175 | | | | |
| Method | SM20 2540G | | | | |
| Instrument | | | | | |



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch
Method
Date

QC results affect the following production samples:
1103930001, 1103930002, 1103930003

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch
Method
Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|-----------|--------|---------|-------|----------|
| 1,1,1,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,1-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,2,2-Tetrachloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1,2-Trichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,1-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,3-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,3-Trichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,4-Trichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2,4-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dibromo-3-chloropropane | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/05/10 |
| 1,2-Dibromoethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichloroethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3,5-Trimethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,3-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 1,4-Dichlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2,2-Dichloropropane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2-Butanone (MEK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| 2-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 2-Hexanone | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| 4-Chlorotoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 4-Isopropyltoluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| 4-Methyl-2-pentanone (MIBK) | 0.156 U | 0.250 | 0.0780 | mg/Kg | 07/05/10 |
| Benzene | 0.00780 U | 0.0125 | 0.00390 | mg/Kg | 07/05/10 |
| Bromobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromodichloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromoform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Bromomethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/05/10 |
| Carbon disulfide | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Carbon tetrachloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chlorobenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chloroethane | 0.124 U | 0.200 | 0.0620 | mg/Kg | 07/05/10 |
| Chloroform | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Chloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |



SGS Ref.# 971860 Method Blank
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch Method Date

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|----------|--------|---------|-------|----------|
| cis-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| cis-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dibromochloromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dibromomethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Dichlorodifluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Ethylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Hexachlorobutadiene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Isopropylbenzene (Cumene) | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Methylene chloride | 0.0620 U | 0.100 | 0.0310 | mg/Kg | 07/05/10 |
| Methyl-t-butyl ether | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Naphthalene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/05/10 |
| n-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| n-Propylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| o-Xylene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| P & M -Xylene | 0.0300 U | 0.0500 | 0.0150 | mg/Kg | 07/05/10 |
| sec-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Styrene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| tert-Butylbenzene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Tetrachloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Toluene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| trans-1,2-Dichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| trans-1,3-Dichloropropene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Trichloroethene | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Trichlorofluoromethane | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Vinyl chloride | 0.0156 U | 0.0250 | 0.00780 | mg/Kg | 07/05/10 |
| Xylenes (total) | 0.0470 U | 0.0750 | 0.0235 | mg/Kg | 07/05/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 92.8 | 69-132 | | % | 07/05/10 |
| 4-Bromofluorobenzene <surr> | 87.2 | 65-144 | | % | 07/05/10 |
| Toluene-d8 <surr> | 99.9 | 84-124 | | % | 07/05/10 |

Batch VMS11350
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971532 Duplicate
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Original 1103929001
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch MXX23178
Method SW3050B
Date 7/6/2010 12:15:00PM

QC results affect the following production samples:
1103930001, 1103930002

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Metals by ICP/MS

| | | | | | | |
|------------|------------------------------|------|-------|---|---------|------------|
| Arsenic | 57.1 | 54.6 | mg/Kg | 4 | (< 20) | 07/07/2010 |
| Batch | MMS6513 | | | | | |
| Method | SW6020 | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | |



SGS Ref.# 971651 Duplicate
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Original 1103240001
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch
Method
Date

QC results affect the following production samples:
1103930001, 1103930002

| Parameter | Original Result | QC Result | Units | RPD | RPD Limits | Analysis Date |
|-----------|-----------------|-----------|-------|-----|------------|---------------|
|-----------|-----------------|-----------|-------|-----|------------|---------------|

Solids

| | | | | | | |
|--------------|------------|------|---|---|--------|------------|
| Total Solids | 85.7 | 86.9 | % | 1 | (< 15) | 07/06/2010 |
| Batch | SPT8175 | | | | | |
| Method | SM20 2540G | | | | | |
| Instrument | | | | | | |



SGS Ref.# 971400 Lab Control Sample
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep **Batch** XXX22965
Method SW3550C
Date 07/06/2010

QC results affect the following production samples:
 1103930001, 1103930002

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 1,2,4-Trichlorobenzene | LCS | 2.87 | 65 | (54-101) | | 4.44 mg/Kg | 07/08/2010 |
| 1,2-Dichlorobenzene | LCS | 2.80 | 63 | (52-92) | | 4.44 mg/Kg | 07/08/2010 |
| 1,3-Dichlorobenzene | LCS | 2.79 | 63 | (52-92) | | 4.44 mg/Kg | 07/08/2010 |
| 1,4-Dichlorobenzene | LCS | 2.71 | 61 | (51-92) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4,5-Trichlorophenol | LCS | 4.04 | 91 | (71-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4,6-Trichlorophenol | LCS | 3.95 | 89 | (67-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dichlorophenol | LCS | 3.29 | 74 | (64-107) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dimethylphenol | LCS | 3.46 | 78 | (63-105) | | 4.44 mg/Kg | 07/08/2010 |
| 2,4-Dinitrophenol | LCS | 6.47 | 81 | (43-130) | | 8 mg/Kg | 07/08/2010 |
| 2,4-Dinitrotoluene | LCS | 4.33 | 97 | (64-115) | | 4.44 mg/Kg | 07/08/2010 |
| 2,6-Dinitrotoluene | LCS | 3.98 | 90 | (67-110) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Chloronaphthalene | LCS | 3.04 | 69 | (52-103) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Chlorophenol | LCS | 2.98 | 67 | (56-94) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Methyl-4,6-dinitrophenol | LCS | 8.04 | 101 | (51-131) | | 8 mg/Kg | 07/08/2010 |
| 2-Methylnaphthalene | LCS | 3.39 | 76 | (61-105) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Methylphenol (o-Cresol) | LCS | 3.02 | 68 | (61-101) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Nitroaniline | LCS | 4.11 | 92 | (70-120) | | 4.44 mg/Kg | 07/08/2010 |
| 2-Nitrophenol | LCS | 3.25 | 73 | (65-101) | | 4.44 mg/Kg | 07/08/2010 |
| 3&4-Methylphenol (p&m-Cresol) | LCS | 4.76 | 77 | (65-105) | | 6.22 mg/Kg | 07/08/2010 |
| 3,3-Dichlorobenzidine | LCS | 4.44 | 100 | (49-128) | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample
 Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | |
| 3-Nitroaniline | LCS | 4.15 | 93 | (66-110) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Bromophenyl-phenylether | LCS | 3.35 | 75 | (53-102) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chloro-3-methylphenol | LCS | 3.87 | 87 | (69-114) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chloroaniline | LCS | 3.15 | 71 | (58-102) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Chlorophenyl-phenylether | LCS | 3.74 | 84 | (53-110) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Nitroaniline | LCS | 4.21 | 95 | (63-115) | | 4.44 mg/Kg | 07/08/2010 |
| 4-Nitrophenol | LCS | 6.10 | 98 | (44-137) | | 6.22 mg/Kg | 07/08/2010 |
| Acenaphthene | LCS | 3.64 | 82 | (57-110) | | 4.44 mg/Kg | 07/08/2010 |
| Acenaphthylene | LCS | 3.69 | 83 | (56-105) | | 4.44 mg/Kg | 07/08/2010 |
| Aniline | LCS | 2.46 | 55 | (40-92) | | 4.44 mg/Kg | 07/08/2010 |
| Anthracene | LCS | 4.06 | 91 | (65-105) | | 4.44 mg/Kg | 07/08/2010 |
| Azobenzene | LCS | 3.92 | 88 | (54-120) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo(a)Anthracene | LCS | 4.26 | 96 | (72-110) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[a]pyrene | LCS | 4.30 | 97 | (71-110) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[b]Fluoranthene | LCS | 3.95 | 89 | (70-115) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[g,h,i]perylene | LCS | 4.63 | 104 | (52-125) | | 4.44 mg/Kg | 07/08/2010 |
| Benzo[k]fluoranthene | LCS | 4.26 | 96 | (66-125) | | 4.44 mg/Kg | 07/08/2010 |
| Benzoic acid | LCS | 2.21 | 36 | (25-76) | | 6.22 mg/Kg | 07/08/2010 |
| Benzyl alcohol | LCS | 3.14 | 71 | (61-110) | | 4.44 mg/Kg | 07/08/2010 |
| Bis(2chloro 1methylethyl)Ether | LCS | 2.91 | 65 | (50-97) | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample
 Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method SW3550C
 Date 07/06/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|-----|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | |
| Bis(2-Chloroethoxy)methane | LCS | 3.24 | 73 | (57-104) | | | 4.44 mg/Kg | 07/08/2010 |
| Bis(2-Chloroethyl)ether | LCS | 2.75 | 62 | (49-91) | | | 4.44 mg/Kg | 07/08/2010 |
| bis(2-Ethylhexyl)phthalate | LCS | 4.40 | 99 | (62-120) | | | 4.44 mg/Kg | 07/08/2010 |
| Butylbenzylphthalate | LCS | 4.53 | 102 | (69-120) | | | 4.44 mg/Kg | 07/08/2010 |
| Chrysene | LCS | 4.16 | 94 | (72-110) | | | 4.44 mg/Kg | 07/08/2010 |
| Dibenzo[a,h]anthracene | LCS | 4.47 | 101 | (61-125) | | | 4.44 mg/Kg | 07/08/2010 |
| Dibenzofuran | LCS | 3.84 | 86 | (60-105) | | | 4.44 mg/Kg | 07/08/2010 |
| Diethylphthalate | LCS | 4.20 | 94 | (50-115) | | | 4.44 mg/Kg | 07/08/2010 |
| Dimethylphthalate | LCS | 3.96 | 89 | (59-110) | | | 4.44 mg/Kg | 07/08/2010 |
| Di-n-butylphthalate | LCS | 4.19 | 94 | (56-110) | | | 4.44 mg/Kg | 07/08/2010 |
| di-n-Octylphthalate | LCS | 4.54 | 102 | (61-123) | | | 4.44 mg/Kg | 07/08/2010 |
| Fluoranthene | LCS | 4.31 | 97 | (64-115) | | | 4.44 mg/Kg | 07/08/2010 |
| Fluorene | LCS | 3.33 | 75 | (64-110) | | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorobenzene | LCS | 4.05 | 91 | (63-120) | | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorobutadiene | LCS | 3.30 | 74 | (57-107) | | | 4.44 mg/Kg | 07/08/2010 |
| Hexachlorocyclopentadiene | LCS | 3.42 | 77 | (35-102) | | | 4.44 mg/Kg | 07/08/2010 |
| Hexachloroethane | LCS | 2.79 | 63 | (51-89) | | | 4.44 mg/Kg | 07/08/2010 |
| Indeno[1,2,3-c,d] pyrene | LCS | 4.44 | 100 | (60-120) | | | 4.44 mg/Kg | 07/08/2010 |
| Isophorone | LCS | 3.44 | 77 | (57-108) | | | 4.44 mg/Kg | 07/08/2010 |
| Naphthalene | LCS | 3.09 | 70 | (51-105) | | | 4.44 mg/Kg | 07/08/2010 |
| Nitrobenzene | LCS | 3.16 | 71 | (53-99) | | | 4.44 mg/Kg | 07/08/2010 |



SGS Ref.# 971400 Lab Control Sample
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep **Batch** XXX22965
Method SW3550C
Date 07/06/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic GC/MS

| | | | | | | | |
|----------------------------|-----|------|----|------------|--|------------|------------|
| N-Nitrosodimethylamine | LCS | 2.68 | 60 | (45-90) | | 4.44 mg/Kg | 07/08/2010 |
| N-Nitroso-di-n-propylamine | LCS | 2.91 | 65 | (59-100) | | 4.44 mg/Kg | 07/08/2010 |
| N-Nitrosodiphenylamine | LCS | 3.33 | 75 | (61-114) | | 4.44 mg/Kg | 07/08/2010 |
| Pentachlorophenol | LCS | 6.05 | 97 | (56-117) | | 6.22 mg/Kg | 07/08/2010 |
| Phenanthrene | LCS | 4.06 | 91 | (63-110) | | 4.44 mg/Kg | 07/08/2010 |
| Phenol | LCS | 3.08 | 69 | (56-97) | | 4.44 mg/Kg | 07/08/2010 |
| Pyrene | LCS | 4.08 | 92 | (70-123) | | 4.44 mg/Kg | 07/08/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 2,4,6-Tribromophenol <surr> | LCS | | 91 | (47-125) | | | 07/08/2010 |
| 2-Fluorobiphenyl <surr> | LCS | | 78 | (45-105) | | | 07/08/2010 |
| 2-Fluorophenol <surr> | LCS | | 67 | (41-84) | | | 07/08/2010 |
| Nitrobenzene-d5 <surr> | LCS | | 70 | (37-100) | | | 07/08/2010 |
| Phenol-d6 <surr> | LCS | | 68 | (48-94) | | | 07/08/2010 |
| Terphenyl-d14 <surr> | LCS | | 93 | (50-120) | | | 07/08/2010 |

Batch XMS5504
Method SW8270D
Instrument HP 6890/5973 SSA



SGS Ref.# 971528 Lab Control Sample
Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Printed Date/Time 07/15/2010 12:44
Prep Batch MXX23178
Method SW3050B
Date 07/06/2010

QC results affect the following production samples:
 1103930001, 1103930002

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------|-----------|-----------------|------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | |
| Arsenic | LCS | 50.7 | 101 | (80-120) | | 50 mg/Kg | 07/07/2010 |
| Cadmium | LCS | 4.90 | 98 | (80-120) | | 5 mg/Kg | 07/07/2010 |
| Chromium | LCS | 19.0 | 95 | (80-120) | | 20 mg/Kg | 07/07/2010 |
| Lead | LCS | 47.8 | 96 | (80-120) | | 50 mg/Kg | 07/07/2010 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/15/2010 12:44

Client Name Shannon & Wilson-Fairbanks

Project Name/# ADOT&PF Inj. Wells

Matrix Soil/Solid (dry weight)

Prep Batch
Method
Date

QC results affect the following production samples:

1103930001, 1103930002, 1103930003

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/15/2010 12:44
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 0.778 | 104 | (77-123) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,1-Trichloroethane | LCS | 0.783 | 104 | (77-129) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 0.691 | 92 | (80-122) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1,2-Trichloroethane | LCS | 0.704 | 94 | (85-121) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethane | LCS | 0.779 | 104 | (81-126) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethene | LCS | 0.839 | 112 | (75-125) | | 0.750 mg/Kg | 07/06/2010 |
| 1,1-Dichloropropene | LCS | 0.783 | 104 | (76-134) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,3-Trichlorobenzene | LCS | 0.748 | 100 | (78-124) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,3-Trichloropropane | LCS | 0.653 | 87 | (77-125) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,4-Trichlorobenzene | LCS | 0.755 | 101 | (77-126) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2,4-Trimethylbenzene | LCS | 0.721 | 96 | (85-121) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 0.635 | 85 | (60-135) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dibromoethane | LCS | 0.774 | 103 | (85-124) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | LCS | 0.760 | 101 | (88-113) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichloroethane | LCS | 0.729 | 97 | (83-121) | | 0.750 mg/Kg | 07/06/2010 |
| 1,2-Dichloropropane | LCS | 0.767 | 102 | (81-120) | | 0.750 mg/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | LCS | 0.689 | 92 | (87-120) | | 0.750 mg/Kg | 07/06/2010 |
| 1,3-Dichlorobenzene | LCS | 0.750 | 100 | (86-117) | | 0.750 mg/Kg | 07/06/2010 |
| 1,3-Dichloropropane | LCS | 0.797 | 106 | (84-123) | | 0.750 mg/Kg | 07/06/2010 |
| 1,4-Dichlorobenzene | LCS | 0.759 | 101 | (86-118) | | 0.750 mg/Kg | 07/06/2010 |
| 2,2-Dichloropropane | LCS | 0.817 | 109 | (69-132) | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/15/2010 12:44

Client Name Shannon & Wilson-Fairbanks
 Project Name/# ADOT&PF Inj. Wells
 Matrix Soil/Solid (dry weight)

Prep Batch
 Method Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|-----------------------------|-----|-------|-----|------------|--|-------------|------------|
| 2-Butanone (MEK) | LCS | 2.12 | 94 | (57-135) | | 2.25 mg/Kg | 07/06/2010 |
| 2-Chlorotoluene | LCS | 0.708 | 94 | (81-122) | | 0.750 mg/Kg | 07/06/2010 |
| 2-Hexanone | LCS | 2.07 | 92 | (58-145) | | 2.25 mg/Kg | 07/06/2010 |
| 4-Chlorotoluene | LCS | 0.731 | 98 | (84-120) | | 0.750 mg/Kg | 07/06/2010 |
| 4-Isopropyltoluene | LCS | 0.680 | 91 | (83-121) | | 0.750 mg/Kg | 07/06/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 2.29 | 102 | (67-135) | | 2.25 mg/Kg | 07/06/2010 |
| Benzene | LCS | 0.791 | 106 | (81-124) | | 0.750 mg/Kg | 07/06/2010 |
| Bromobenzene | LCS | 0.753 | 100 | (86-119) | | 0.750 mg/Kg | 07/06/2010 |
| Bromochloromethane | LCS | 0.861 | 115 | (79-125) | | 0.750 mg/Kg | 07/06/2010 |
| Bromodichloromethane | LCS | 0.716 | 96 | (81-127) | | 0.750 mg/Kg | 07/06/2010 |
| Bromoform | LCS | 0.781 | 104 | (72-135) | | 0.750 mg/Kg | 07/06/2010 |
| Bromomethane | LCS | 0.681 | 91 | (49-141) | | 0.750 mg/Kg | 07/06/2010 |
| Carbon disulfide | LCS | 1.19 | 106 | (58-155) | | 1.13 mg/Kg | 07/06/2010 |
| Carbon tetrachloride | LCS | 0.744 | 99 | (79-128) | | 0.750 mg/Kg | 07/06/2010 |
| Chlorobenzene | LCS | 0.755 | 101 | (84-121) | | 0.750 mg/Kg | 07/06/2010 |
| Chloroethane | LCS | 0.708 | 94 | (51-141) | | 0.750 mg/Kg | 07/06/2010 |
| Chloroform | LCS | 0.769 | 103 | (77-124) | | 0.750 mg/Kg | 07/06/2010 |
| Chloromethane | LCS | 0.642 | 86 | (54-129) | | 0.750 mg/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | LCS | 0.788 | 105 | (82-124) | | 0.750 mg/Kg | 07/06/2010 |
| cis-1,3-Dichloropropene | LCS | 0.788 | 105 | (82-122) | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/15/2010 12:44
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| Dibromochloromethane | LCS | 0.766 | 102 | (84-125) | | 0.750 mg/Kg | 07/06/2010 |
| Dibromomethane | LCS | 0.802 | 107 | (80-123) | | 0.750 mg/Kg | 07/06/2010 |
| Dichlorodifluoromethane | LCS | 0.670 | 89 | (43-135) | | 0.750 mg/Kg | 07/06/2010 |
| Ethylbenzene | LCS | 0.766 | 102 | (87-119) | | 0.750 mg/Kg | 07/06/2010 |
| Hexachlorobutadiene | LCS | 0.793 | 106 | (74-124) | | 0.750 mg/Kg | 07/06/2010 |
| Isopropylbenzene (Cumene) | LCS | 0.796 | 106 | (89-121) | | 0.750 mg/Kg | 07/06/2010 |
| Methylene chloride | LCS | 0.688 | 92 | (63-137) | | 0.750 mg/Kg | 07/06/2010 |
| Methyl-t-butyl ether | LCS | 1.13 | 101 | (76-133) | | 1.13 mg/Kg | 07/06/2010 |
| Naphthalene | LCS | 0.700 | 93 | (73-131) | | 0.750 mg/Kg | 07/06/2010 |
| n-Butylbenzene | LCS | 0.744 | 99 | (82-127) | | 0.750 mg/Kg | 07/06/2010 |
| n-Propylbenzene | LCS | 0.695 | 93 | (82-125) | | 0.750 mg/Kg | 07/06/2010 |
| o-Xylene | LCS | 0.781 | 104 | (89-120) | | 0.750 mg/Kg | 07/06/2010 |
| P & M -Xylene | LCS | 1.55 | 104 | (88-121) | | 1.50 mg/Kg | 07/06/2010 |
| sec-Butylbenzene | LCS | 0.708 | 94 | (84-122) | | 0.750 mg/Kg | 07/06/2010 |
| Styrene | LCS | 0.790 | 105 | (91-120) | | 0.750 mg/Kg | 07/06/2010 |
| tert-Butylbenzene | LCS | 0.723 | 96 | (82-122) | | 0.750 mg/Kg | 07/06/2010 |
| Tetrachloroethene | LCS | 0.752 | 100 | (82-125) | | 0.750 mg/Kg | 07/06/2010 |
| Toluene | LCS | 0.827 | 110 | (87-119) | | 0.750 mg/Kg | 07/06/2010 |
| trans-1,2-Dichloroethene | LCS | 0.796 | 106 | (79-125) | | 0.750 mg/Kg | 07/06/2010 |
| trans-1,3-Dichloropropene | LCS | 0.770 | 103 | (86-122) | | 0.750 mg/Kg | 07/06/2010 |
| Trichloroethene | LCS | 0.817 | 109 | (77-124) | | 0.750 mg/Kg | 07/06/2010 |



SGS Ref.# 971861 Lab Control Sample

Printed Date/Time 07/15/2010 12:44
Prep Batch

Client Name Shannon & Wilson-Fairbanks
Project Name/# ADOT&PF Inj. Wells
Matrix Soil/Solid (dry weight)

Method
Date

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|------------------------|-----|-------|----|------------|--|-------------|------------|
| Trichlorofluoromethane | LCS | 0.700 | 93 | (64-139) | | 0.750 mg/Kg | 07/06/2010 |
|------------------------|-----|-------|----|------------|--|-------------|------------|

| | | | | | | | |
|----------------|-----|-------|----|------------|--|-------------|------------|
| Vinyl chloride | LCS | 0.735 | 98 | (67-125) | | 0.750 mg/Kg | 07/06/2010 |
|----------------|-----|-------|----|------------|--|-------------|------------|

| | | | | | | | |
|-----------------|-----|------|-----|------------|--|------------|------------|
| Xylenes (total) | LCS | 2.34 | 104 | (89-120) | | 2.25 mg/Kg | 07/06/2010 |
|-----------------|-----|------|-----|------------|--|------------|------------|

Surrogates

| | | | | | | | |
|------------------------------|-----|--|----|------------|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 96 | (69-132) | | | 07/06/2010 |
|------------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-----------------------------|-----|--|----|------------|--|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 89 | (65-144) | | | 07/06/2010 |
|-----------------------------|-----|--|----|------------|--|--|------------|

| | | | | | | | |
|-------------------|-----|--|-----|------------|--|--|------------|
| Toluene-d8 <surr> | LCS | | 105 | (84-124) | | | 07/06/2010 |
|-------------------|-----|--|-----|------------|--|--|------------|

Batch VMS11350
Method SW8260B
Instrument HP 5890 Series II MS5 VLA



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103930001, 1103930002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| 1,2,4-Trichlorobenzene | MS | (0.263) U | 3.32 | 71 | (54-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.47 | 75 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,2-Dichlorobenzene | MS | (0.263) U | 3.32 | 71 | (52-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.44 | 74 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,3-Dichlorobenzene | MS | (0.263) U | 3.16 | 68 | (52-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.31 | 71 | | 5 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 1,4-Dichlorobenzene | MS | (0.263) U | 3.20 | 68 | (51-92) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.29 | 71 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4,5-Trichlorophenol | MS | (0.263) U | 4.49 | 96 | (71-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.66 | 100 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4,6-Trichlorophenol | MS | (0.263) U | 4.61 | 98 | (67-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.65 | 100 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dichlorophenol | MS | (0.263) U | 3.84 | 82 | (64-107) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.99 | 86 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dimethylphenol | MS | (0.263) U | 3.85 | 82 | (63-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.99 | 86 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,4-Dinitrophenol | MS | (3.16) U | 7.24 | 86 | (43-130) | | | 8.43 mg/Kg | 07/07/2010 |
| | MSD | | 7.80 | 93 | | 7 | (< 30) | 8.38 mg/Kg | 07/07/2010 |
| 2,4-Dinitrotoluene | MS | (0.263) U | 4.77 | 102 | (64-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.87 | 105 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2,6-Dinitrotoluene | MS | (0.263) U | 4.39 | 94 | (67-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.49 | 96 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Chloronaphthalene | MS | (0.263) U | 3.65 | 78 | (52-103) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.74 | 80 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Chlorophenol | MS | (0.263) U | 3.49 | 75 | (56-94) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.72 | 80 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Methyl-4,6-dinitrophenol | MS | (2.11) U | 9.19 | 109 | (51-131) | | | 8.43 mg/Kg | 07/07/2010 |
| | MSD | | 9.31 | 111 | | 1 | (< 30) | 8.38 mg/Kg | 07/07/2010 |
| 2-Methylnaphthalene | MS | (0.263) U | 3.83 | 82 | (61-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.13 | 89 | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Methylphenol (o-Cresol) | MS | (0.263) U | 3.65 | 78 | (61-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.96 | 85 | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Nitroaniline | MS | (0.263) U | 4.50 | 96 | (70-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.57 | 98 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 2-Nitrophenol | MS | (0.263) U | 3.90 | 83 | (65-101) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.05 | 87 | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 3&4-Methylphenol (p&m-Cresol) | MS | (1.05) U | 5.79 | 88 | (65-105) | | | 6.56 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|--------------|-----------------|-----------|------------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| | MSD | | 6.34 | 97 | | 9 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| 3,3-Dichlorobenzidine | MS (0.263) U | 4.86 | 104 | (49-128) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 5.05 | 108 | | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 3-Nitroaniline | MS (0.527) U | 4.73 | 101 | (66-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.71 | 101 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Bromophenyl-phenylether | MS (0.263) U | 3.65 | 78 | (53-102) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.70 | 80 | | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chloro-3-methylphenol | MS (0.263) U | 4.24 | 91 | (69-114) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.57 | 98 | | | 8 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chloroaniline | MS (0.263) U | 3.82 | 82 | (58-102) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.08 | 88 | | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Chlorophenyl-phenylether | MS (0.263) U | 4.11 | 88 | (53-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.15 | 89 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Nitroaniline | MS (3.16) U | 4.86 | 104 | (63-115) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 5.02 | 108 | | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| 4-Nitrophenol | MS (1.05) U | 6.71 | 102 | (44-137) | | | | 6.56 mg/Kg | 07/07/2010 |
| | MSD | 6.94 | 107 | | | 4 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| Acenaphthene | MS (0.263) U | 4.05 | 87 | (57-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.06 | 87 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Acenaphthylene | MS (0.263) U | 4.14 | 88 | (56-105) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.18 | 90 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Aniline | MS (2.11) U | 3.38 | 72 | (40-92) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.70 | 80 | | | 9 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Anthracene | MS (0.263) U | 4.42 | 94 | (65-105) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.42 | 95 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Azobenzene | MS (0.263) U | 4.29 | 92 | (54-120) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.26 | 92 | | | 0 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo(a)Anthracene | MS (0.263) U | 4.60 | 98 | (72-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.79 | 103 | | | 4 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[a]pyrene | MS (0.263) U | 4.56 | 97 | (71-110) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.63 | 99 | | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[b]Fluoranthene | MS (0.263) U | 4.53 | 97 | (70-115) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.69 | 101 | | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[g,h,i]perylene | MS (0.263) U | 4.77 | 102 | (52-125) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 4.81 | 103 | | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzo[k]fluoranthene | MS (0.263) U | 3.80 | 81 | (66-125) | | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | 3.53 | 76 | | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Benzoic acid | MS (1.58) U | 2.24 | 34 | (25-76) | | | | 6.56 mg/Kg | 07/07/2010 |
| | MSD | 2.78 | 43 | | | 21 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| Benzyl alcohol | MS (0.263) U | 3.82 | 82 | (61-110) | | | | 4.69 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| <u>Semivolatile Organic GC/MS</u> | | | | | | | | | |
| | | MSD | 4.20 | 90 | | 10 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2chloro1methylethyl)Ether | | MS (0.263) U | 3.39 | 72 | (50-97) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.63 | 78 | | 7 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2-Chloroethoxy)methane | | MS (0.263) U | 3.66 | 78 | (57-104) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.87 | 83 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Bis(2-Chloroethyl)ether | | MS (0.263) U | 3.35 | 72 | (49-91) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.53 | 76 | | 5 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| bis(2-Ethylhexyl)phthalate | | MS (0.263) U | 4.72 | 101 | (62-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.89 | 105 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Butylbenzylphthalate | | MS (0.263) U | 4.88 | 104 | (69-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.97 | 107 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Chrysene | | MS (0.263) U | 4.31 | 92 | (72-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.36 | 94 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dibenzo[a,h]anthracene | | MS (0.263) U | 4.74 | 101 | (61-125) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.77 | 102 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dibenzofuran | | MS (0.263) U | 4.23 | 90 | (60-105) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.31 | 92 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Diethylphthalate | | MS (0.263) U | 4.43 | 95 | (50-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.59 | 99 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Dimethylphthalate | | MS (0.263) U | 4.36 | 93 | (59-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.43 | 95 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Di-n-butylphthalate | | MS (0.263) U | 4.50 | 96 | (56-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.55 | 98 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| di-n-Octylphthalate | | MS (0.263) U | 4.77 | 102 | (61-123) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.93 | 106 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Fluoranthene | | MS (0.263) U | 4.50 | 96 | (64-115) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.54 | 98 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Fluorene | | MS (0.263) U | 3.64 | 78 | (64-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.74 | 80 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorobenzene | | MS (0.263) U | 4.54 | 97 | (63-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.59 | 99 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorobutadiene | | MS (0.263) U | 3.77 | 80 | (57-107) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.86 | 83 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachlorocyclopentadiene | | MS (0.737) U | 4.11 | 88 | (35-102) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.07 | 87 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Hexachloroethane | | MS (0.263) U | 3.27 | 70 | (51-89) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 3.38 | 73 | | 3 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Indeno[1,2,3-c,d] pyrene | | MS (0.263) U | 4.60 | 98 | (60-120) | | | 4.69 mg/Kg | 07/07/2010 |
| | | MSD | 4.67 | 100 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Isophorone 48 of 60 | | MS (0.263) U | 3.85 | 82 | (57-108) | | | 4.69 mg/Kg | 07/07/2010 |



SGS Ref.# 971402 Matrix Spike
 971403 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch XXX22965
 Method Sonication Extraction Soil SW8
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------------------------------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Semivolatile Organic GC/MS | | | | | | | | | |
| Naphthalene | MSD | | 4.10 | 88 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| | MS | (0.263) U | 3.52 | 75 | (51-105) | | | 4.69 mg/Kg | 07/07/2010 |
| Nitrobenzene | MSD | | 3.68 | 79 | | 5 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| | MS | (0.263) U | 3.61 | 77 | (53-99) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.68 | 79 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| N-Nitrosodimethylamine | MS | (0.263) U | 3.47 | 74 | (45-90) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.50 | 75 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| N-Nitroso-di-n-propylamine | MS | (0.263) U | 3.67 | 78 | (59-100) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.10 | 88 | | 11 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| N-Nitrosodiphenylamine | MS | (0.263) U | 3.70 | 79 | (61-114) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.62 | 78 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Pentachlorophenol | MS | (2.11) U | 6.86 | 105 | (56-117) | | | 6.56 mg/Kg | 07/07/2010 |
| | MSD | | 6.96 | 107 | | 2 | (< 30) | 6.52 mg/Kg | 07/07/2010 |
| Phenanthrene | MS | (0.263) U | 4.44 | 95 | (63-110) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.40 | 95 | | 1 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Phenol | MS | (0.263) U | 3.71 | 79 | (56-97) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 3.94 | 85 | | 6 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Pyrene | MS | (0.263) U | 4.42 | 95 | (70-123) | | | 4.69 mg/Kg | 07/07/2010 |
| | MSD | | 4.51 | 97 | | 2 | (< 30) | 4.66 mg/Kg | 07/07/2010 |
| Surrogates | | | | | | | | | |
| 2,4,6-Tribromophenol <surr> | MS | | 9.28 | 99 | (47-125) | | | | 07/07/2010 |
| | MSD | | 9.40 | 101 | | 1 | | | 07/07/2010 |
| 2-Fluorobiphenyl <surr> | MS | | 4.02 | 86 | (45-105) | | | | 07/07/2010 |
| | MSD | | 4.02 | 86 | | 0 | | | 07/07/2010 |
| 2-Fluorophenol <surr> | MS | | 6.65 | 71 | (41-84) | | | | 07/07/2010 |
| | MSD | | 6.65 | 71 | | 0 | | | 07/07/2010 |
| Nitrobenzene-d5 <surr> | MS | | 3.64 | 78 | (37-100) | | | | 07/07/2010 |
| | MSD | | 3.72 | 80 | | 2 | | | 07/07/2010 |
| Phenol-d6 <surr> | MS | | 7.43 | 79 | (48-94) | | | | 07/07/2010 |
| | MSD | | 7.77 | 83 | | 4 | | | 07/07/2010 |
| Terphenyl-d14 <surr> | MS | | 4.55 | 97 | (50-120) | | | | 07/07/2010 |
| | MSD | | 4.67 | 100 | | 3 | | | 07/07/2010 |

Batch XMS5502
 Method SW8270D
 Instrument HP 6890/5973 SSA



SGS Ref.# 971529 Matrix Spike
 971530 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch MXX23178
 Method Soils/Solids Digest for Metals b
 Date 07/06/2010

Original 1103929001
 Matrix Soil/Solid (dry weight)

QC results affect the following production samples:
 1103930001, 1103930002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-------------------------|------------------------------|-----------------|-----------|-----------|-----------------|--------------|------------|---------------|---------------|
| Metals by ICP/MS | | | | | | | | | |
| Arsenic | MS | 57.1 | 162 | | 211* (80-120) | | | 49.5 mg/Kg | 07/07/2010 |
| | MSD | | 97.1 | | 77* | 50 * (< 20) | | 51.9 mg/Kg | 07/07/2010 |
| Cadmium | MS | (0.206) U | 5.01 | | 101 (80-120) | | | 4.95 mg/Kg | 07/07/2010 |
| | MSD | | 5.14 | | 99 | 3 (< 20) | | 5.19 mg/Kg | 07/07/2010 |
| Chromium | MS | 11.1 | 32.2 | | 107 (80-120) | | | 19.8 mg/Kg | 07/07/2010 |
| | MSD | | 29.2 | | 88 | 10 (< 20) | | 20.7 mg/Kg | 07/07/2010 |
| Lead | MS | 9.99 | 48.5 | | 78* (80-120) | | | 49.5 mg/Kg | 07/07/2010 |
| | MSD | | 48.7 | | 75* | 0 (< 20) | | 51.9 mg/Kg | 07/07/2010 |
| Batch | MMS6513 | | | | | | | | |
| Method | SW6020 | | | | | | | | |
| Instrument | Perkin Elmer Sciex ICP-MS P3 | | | | | | | | |



SGS Ref.# 971531 Bench Spike DIGESTED

Printed Date/Time 07/15/2010 12:44
Prep Batch MXX23178
Method Soils/Solids Digest for Metals b
Date 07/06/2010

Original 1103929001
Matrix Soil/Solid (dry weight)

QC results affect the following production samples:

1103930001, 1103930002

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Metals by ICP/MS

| | | | | | | | | | |
|---------|-----|------|------|----|------------|--|--|------------|------------|
| Arsenic | BND | 57.1 | 68.9 | 92 | (75-125) | | | 12.8 mg/Kg | 07/07/2010 |
| Lead | BND | 9.99 | 116 | 83 | (75-125) | | | 128 mg/Kg | 07/07/2010 |

Batch MMS6513
Method SW6020
Instrument Perkin Elmer Sciex ICP-MS P3



SGS Ref.# 971863 Matrix Spike
971864 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
Prep Batch
Method
Date

Original 971862
Matrix Solid/Soil (Wet Weight)

QC results affect the following production samples:

1103930001, 1103930002, 1103930003

| Parameter | Qualifiers | Original Result | QC Result | Pet Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | MS | (0.00962) U | 0.466 | 101 | (77-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.510 | 110 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,1-Trichloroethane | MS | (0.00962) U | 0.431 | 93 | (77-129) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.475 | 103 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,2,2-Tetrachloroethane | MS | (0.00962) U | 0.506 | 110 | (80-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.520 | 112 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1,2-Trichloroethane | MS | (0.00962) U | 0.527 | 114 | (85-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.508 | 110 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethane | MS | (0.00962) U | 0.450 | 97 | (81-126) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.481 | 104 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloroethene | MS | (0.00962) U | 0.464 | 100 | (75-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.527 | 114 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,1-Dichloropropene | MS | (0.00962) U | 0.429 | 93 | (76-134) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.468 | 101 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,3-Trichlorobenzene | MS | (0.00962) U | 0.420 | 91 | (78-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.485 | 105 | | 14 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,3-Trichloropropane | MS | (0.00962) U | 0.500 | 108 | (77-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.520 | 113 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,4-Trichlorobenzene | MS | (0.00962) U | 0.485 | 105 | (77-126) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.501 | 108 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2,4-Trimethylbenzene | MS | 0.0549 | 0.479 | 92 | (85-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.542 | 105 | | 12 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dibromo-3-chloropropane | MS | (0.0382) U | 0.455 | 99 | (60-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dibromoethane | MS | (0.00962) U | 0.483 | 105 | (85-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.504 | 109 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichlorobenzene | MS | (0.00962) U | 0.464 | 100 | (88-113) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.495 | 107 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichloroethane | MS | (0.00962) U | 0.441 | 95 | (83-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.429 | 93 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,2-Dichloropropane | MS | (0.00962) U | 0.457 | 99 | (81-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.478 | 103 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3,5-Trimethylbenzene | MS | 0.0740 | 0.523 | 97 | (87-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.559 | 105 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3-Dichlorobenzene | MS | (0.00962) U | 0.443 | 96 | (86-117) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.493 | 107 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,3-Dichloropropane | MS | (0.00962) U | 0.491 | 106 | (84-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.508 | 110 | | 4 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 1,4-Dichlorobenzene | MS | (0.00962) U | 0.460 | 99 | (86-118) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.496 | 107 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|------|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| 2,2-Dichloropropane | MS | (0.00962) U | 0.437 | 95 | (69-132) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.469 | 101 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 2-Butanone (MEK) | MS | (0.0962) U | 1.44 | 104 | (57-135) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.32 | 95 | | 9 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| 2-Chlorotoluene | MS | (0.00962) U | 0.438 | 95 | (81-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.500 | 108 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 2-Hexanone | MS | (0.0962) U | 1.49 | 108 | (58-145) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.49 | 108 | | 0 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| 4-Chlorotoluene | MS | (0.00962) U | 0.428 | 93 | (84-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.476 | 103 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 4-Isopropyltoluene | MS | 0.0122J | 0.458 | 97 | (83-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.539 | 114 | | 16 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| 4-Methyl-2-pentanone (MIBK) | MS | (0.0962) U | 1.65 | 119 | (67-135) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.59 | 115 | | 4 | (< 20) | 1.39 mg/Kg | 07/06/2010 |
| Benzene | MS | 0.0321 | 0.492 | 100 | (81-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.503 | 102 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromobenzene | MS | (0.00962) U | 0.462 | 100 | (86-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.501 | 109 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromochloromethane | MS | (0.00962) U | 0.479 | 104 | (79-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.504 | 109 | | 5 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromodichloromethane | MS | (0.00962) U | 0.444 | 96 | (81-127) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.451 | 98 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromoform | MS | (0.00962) U | 0.488 | 106 | (72-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.492 | 106 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Bromomethane | MS | (0.0766) U | 0.360 | 78 | (49-141) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.402 | 87 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Carbon disulfide | MS | (0.00962) U | 0.646 | 93 | (58-155) | | | 0.693 mg/Kg | 07/06/2010 |
| | MSD | | 0.696 | 100 | | 8 | (< 20) | 0.693 mg/Kg | 07/06/2010 |
| Carbon tetrachloride | MS | (0.00962) U | 0.422 | 91 | (79-128) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 5 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chlorobenzene | MS | (0.00962) U | 0.463 | 100 | (84-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.505 | 109 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloroethane | MS | (0.0766) U | 0.398 | 86 | (51-141) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 96 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloroform | MS | (0.00962) U | 0.458 | 99 | (77-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.466 | 101 | | 2 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Chloromethane | MS | (0.00962) U | 0.357 | 77 | (54-129) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.381 | 82 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| cis-1,2-Dichloroethene | MS | (0.00962) U | 0.464 | 100 | (82-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.370 | 80* | | 23 * | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|--|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| cis-1,3-Dichloropropene | MS | (0.00962) U | 0.482 | 104 | (82-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.478 | 103 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dibromochloromethane | MS | (0.00962) U | 0.467 | 101 | (84-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.494 | 107 | | 6 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dibromomethane | MS | (0.00962) U | 0.476 | 103 | (80-123) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.489 | 106 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Dichlorodifluoromethane | MS | (0.00962) U | 0.322 | 70 | (43-135) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.380 | 82 | | 17 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Ethylbenzene | MS | 0.0515 | 0.496 | 96 | (87-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.565 | 111 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Hexachlorobutadiene | MS | (0.00962) U | 0.506 | 110 | (74-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.553 | 120 | | 9 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Isopropylbenzene (Cumene) | MS | 0.00941J | 0.468 | 99 | (89-121) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.531 | 113 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Methylene chloride | MS | 0.0199J | 0.433 | 89 | (63-137) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.445 | 92 | | 3 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Methyl-t-butyl ether | MS | (0.00962) U | 0.729 | 105 | (76-133) | | | 0.693 mg/Kg | 07/06/2010 |
| | MSD | | 0.742 | 107 | | 2 | (< 20) | 0.693 mg/Kg | 07/06/2010 |
| Naphthalene | MS | 0.0318 | 0.495 | 100 | (73-131) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.536 | 109 | | 8 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| n-Butylbenzene | MS | (0.00962) U | 0.469 | 102 | (82-127) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.521 | 113 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| n-Propylbenzene | MS | 0.0134J | 0.454 | 95 | (82-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.488 | 103 | | 7 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| o-Xylene | MS | 0.114 | 0.556 | 96 | (89-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.613 | 108 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| P & M -Xylene | MS | 0.182 | 1.11 | 100 | (88-121) | | | 0.924 mg/Kg | 07/06/2010 |
| | MSD | | 1.20 | 111 | | 8 | (< 20) | 0.924 mg/Kg | 07/06/2010 |
| sec-Butylbenzene | MS | (0.00962) U | 0.442 | 96 | (84-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.521 | 113 | | 16 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Styrene | MS | (0.00962) U | 0.462 | 100 | (91-120) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.514 | 111 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| tert-Butylbenzene | MS | (0.00962) U | 0.446 | 96 | (82-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.490 | 106 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Tetrachloroethene | MS | (0.00962) U | 0.436 | 94 | (82-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.489 | 106 | | 11 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Toluene | MS | 0.0696 | 0.554 | 105 | (87-119) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.612 | 117 | | 10 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| trans-1,2-Dichloroethene | MS | (0.00962) U | 0.443 | 96 | (79-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.512 | 111 | | 15 | (< 20) | 0.462 mg/Kg | 07/06/2010 |



SGS Ref.# 971863 Matrix Spike
 971864 Matrix Spike Duplicate

Printed Date/Time 07/15/2010 12:44
 Prep Batch
 Method
 Date

Original 971862
 Matrix Solid/Soil (Wet Weight)

| Parameter | Qualifiers | Original Result | QC Result | Pct Recov | MS/MSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|
|-----------|------------|-----------------|-----------|-----------|---------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | | |
|---------------------------|-----|-------------|-------|-----|------------|----|---------|-------------|------------|
| trans-1,3-Dichloropropene | MS | (0.00962) U | 0.488 | 106 | (86-122) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.482 | 104 | | 1 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Trichloroethene | MS | (0.00962) U | 0.440 | 95 | (77-124) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.499 | 108 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Trichlorofluoromethane | MS | (0.00962) U | 0.363 | 79 | (64-139) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.413 | 89 | | 13 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Vinyl chloride | MS | (0.00962) U | 0.375 | 81 | (67-125) | | | 0.462 mg/Kg | 07/06/2010 |
| | MSD | | 0.422 | 91 | | 12 | (< 20) | 0.462 mg/Kg | 07/06/2010 |
| Xylenes (total) | MS | 0.296 | 1.66 | 99 | (89-120) | | | 1.39 mg/Kg | 07/06/2010 |
| | MSD | | 1.82 | 110 | | 9 | (< 20) | 1.39 mg/Kg | 07/06/2010 |

Surrogates

| | | | | | | | | | |
|------------------------------|-----|--|-------|-----|------------|----|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | MS | | 0.451 | 98 | (69-132) | | | | 07/06/2010 |
| | MSD | | 0.456 | 99 | | 1 | | | 07/06/2010 |
| 4-Bromofluorobenzene <surr> | MS | | 1.07 | 99 | (65-144) | | | | 07/06/2010 |
| | MSD | | 1.18 | 109 | | 10 | | | 07/06/2010 |
| Toluene-d8 <surr> | MS | | 0.460 | 100 | (84-124) | | | | 07/06/2010 |
| | MSD | | 0.506 | 109 | | 10 | | | 07/06/2010 |

Batch VMS11350
 Method SW8260B
 Instrument HP 5890 Series II MS5 VLA



SC 1103930

CHAI

ORD

- Locations Nationwide
 - Alaska
 - Maryland
 - New Jersey
 - North Carolina
 - Ohio
 - West Virginia
- www.us.sgs.com

57 of

1 CLIENT: Shannon & Wilson
 CONTACT: Andrea Carlson
 PROJECT: A007BPF Inj. Wells
 REPORTS TO: S&W
 INVOICE TO: S&W
 QUOTE #: 32-1-17368
 P.O.#: 32-1-17368

SGS Reference #: _____ page _____ of _____

| # | CONTAINERS | SAMPLE TYPE | C- COMP | G- GRAB | MI- Multi Incremental Samples | PRESERVATIVES USED | ANALYSIS REQUIRED | REMARKS/ LOC ID | | |
|---|------------|-----------------------|------------|------------|--|--------------------|-------------------|--------------------|----------------------------------|------|
| | | | | | | | | | 3 | |
| 1 | A-C | 7368-070110 - BIRCH 1 | 7-1-10 | 9:09 | Soil | X | X | VOC | ARSenic, Cadmium, Chromium, Lead | RUSH |
| 2 | ↓ | 7368-070110 - BIRCH 2 | 7-1-10 | 10:59 | Soil | X | X | S-VOC | | |
| 3 | A | TRIP BLANK | | | | X | | | | |

4

Collected/Relinquished By: (1) *[Signature]* Received By: 7/2/10 10:00am Cannon Beard

Relinquished By: (2) Cannon Beard Received By: 7/2/10 1500

Relinquished By: (3) Received By:

Relinquished By: (4) 7/3/10 1620 Received For Laboratory By: *[Signature]*

Requested Turnaround Time and/or Special Instructions: RUSH 3-day

Special Deliverable Requirements: Use trip blank for both COCs

Temperature, Blank °C: 21.7 Therm # 400

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT



SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|--|--|--|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | Yes No <u>N/A</u> <u>Yes</u> No N/A | |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | Yes No N/A <u>Yes</u> No N/A | |
| Delivery method (specify all that apply): <u>Client</u> USPS Alert Courier Road Runner AK Air Lynden Carlile ERA FedEx UPS NAC PenAir Other: | Note airbill/tracking # See Attached or <u>N/A</u> | |
| * For samples received with payment, note amount (\$) and cash / check / CC (circle one). * For samples received in FBKS, ANCH staff will verify all criteria are reviewed. SRF Initiated by: <u>CB</u> 7/2 N/A N/A | | |
| Do samples match COC (i.e., sample IDs, dates/times collected)? Are analyses requested unambiguous? | <u>Yes</u> No N/A <u>Yes</u> No N/A | |
| Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): <u>Bubble wrap</u> Separate plastic bags Vermiculite Other: | <u>Yes</u> No N/A | |
| Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB? | Yes No <u>N/A</u> <u>Yes</u> No N/A | |
| Were proper containers (type/mass/volume/preservative) used? Were the bottles provided by SGS? (Note apparent exceptions.) Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? | <u>Yes</u> No N/A <u>Yes</u> No N/A Yes No N/A | |
| For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F066) for documentation.</i> | Yes No <u>N/A</u> Yes No <u>N/A</u> | |
| For <u>RUSH</u> or SHORT HOLD TIME samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified? | <u>Yes</u> No N/A | RUSH DUE 7/20/07 |
| For client requested, site-specific QC (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly? | Yes No <u>N/A</u> | |
| For special handling (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? | Yes No <u>N/A</u> | |
| Was PEER REVIEW of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, each container had a unique container ID)? Was the WO# recorded in Front Counter/Sample Receiving log? | <u>Yes</u> No N/A <u>Yes</u> No N/A | SRF Completed by: <u>al</u> Bottle Sheet by: <u>al</u> Peer Reviewed by: <u>MS</u> |
| For any questions answered "NO," was the PM notified? | Yes No <u>N/A</u> | PM = <u>N/A</u> |
| Additional notes (if applicable): | | |

| WO# (7 digits) | Sample # | Sample # | Container ID | Container ID | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|----------|----------|--------------|--------------|------------|------------|------------------------|-------------|----------------------|--|
| | | | | | | | | | | |
| SAMPLE ID | | | TYPE | | CONTAINERS | | ANALYSIS | | Type comments below: | |
| 1103930 | 001 | 002 | A | A | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103930 | 001 | 002 | B | B | 2 Soil | | N/A | S_Weigh_Out | | |
| 1103930 | 001 | 002 | C | C | 2 Soil | | MeOH+BFB * | S_GRO/VOC | | |
| 1103930 | 003 | 003 | A | A | 2 Soil | Trip Blank | MeOH+BFB * | S_GRO/VOC | | |
| | | | | | | | | | | |

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT&PF Maintenance Facilities

Date: July 20, 2010

Laboratory Report Date: July 15, 2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Amanda Compton

Title: Environmental Scientist

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1103930

ADEC File Number: 140.26.018

(NOTE: NA = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

NA / **Yes** / No

Comments: *Project samples were transferred from SGS-Fairbanks to SGS-Anchorage.*

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? *NA* / **Yes** / *No*

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / *No*

Comments: *No problems were noted by laboratory.*

- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? *NA* / **Yes** / *No*

Comments: *No discrepancies were noted by laboratory.*

- e. Data quality or usability affected? Explain. **NA**

Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / *No*

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**

Comments: *For MS/MSD discrepancies see section 6.b. ICV/CCV recovery of several VOCs and one SVOC do not meet QC criteria.*

- c. Were corrective actions documented? **None Noted** / *Yes*

Comments:

- d. What is the effect on data quality/usability, according to the case narrative? *NA*

Comments: *The analytes associated with ICV/CCV recovery discrepancies were not detected above the respective PQLs in project sample; project sample results are considered unaffected.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / *No*

Comments:

- b. All applicable holding times met? **Yes** / *No*

Comments:

- c. All soils reported on a dry-weight basis? *NA* / **Yes** / *No*

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? Yes / **No**

Comments: *The PQLs for multiple VOCs and SVOCs are greater than the respective cleanup levels.*

- e. Data quality or usability affected? Explain. *NA*

Comments: *It cannot be determined if an analyte is present between the cleanup level and the PQL.*

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?

Yes / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **NA**

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- v. Data quality or usability affected? Explain. **NA**

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?

(LCS/LCSD required per AK methods, LCS required per SW846) *NA* / **Yes** / No

Comments: *LCS only. MS/MSD used to calculate precision.*

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? *NA* / **Yes** / No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) Yes / **No**

Comments: *MS/MSD recoveries of metals arsenic and lead, and MSD recovery of VOC cis-1,2-dichloroethene are outside QC criteria.*

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) Yes / **No**
Comments: *RPDs for arsenic and cis-1,2-dichloroethene are outside QC criteria.*

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**
Comments: *The RPD for arsenic is accepted based on acceptable sample/duplicate RPD and cis-1,2-dichloroethene was not detected above the reporting limit in the associated sample.*

- vi. Do the affected samples(s) have data flags? NA / Yes / **No**
Comments:

If so, are the data flags clearly defined? **NA** / Yes / No
Comments:

- vii. Data quality or usability affected? Explain. NA
Comments: *The MS/MSD post-digestion spike recoveries of arsenic and lead were successful, and the LCS recovery of these metals were within QC limits; accuracy of arsenic and lead in project samples is considered unaffected. LCS recovery of cis-1,2-dichloroethene is within QC criteria; project sample accuracy of this VOC is considered unaffected by MSD recovery bias. The sample/duplicate RPD for arsenic is within QC criteria; project sample precision of arsenic is considered usable. Cis-1,2-dichloroethene was not detected above PQL in project samples.*

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? NA / **Yes** / No
Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) NA / **Yes** / No
Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / Yes / No
Comments:

If so, are the data flags clearly defined? **NA** / Yes / No
Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

i. One trip blank reported per matrix, analysis and cooler? **NA** / **Yes** / **No**
Comments:

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **NA** / **Yes** / **No** (if no explain):

iii. All results less than PQL? **NA** / **Yes** / **No**
Comments:

iv. If above PQL, what samples are affected? **NA**
Comments:

v. Data quality or usability affected? Explain. **NA**
Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / **No**
Comments: *A field duplicate for this project is included in a separate work order.*

ii. Were the field duplicates submitted blind to the lab? **NA** / **Yes** / **No**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) **NA** / **Yes** / **No**
Comments:

iv. Data quality or usability affected? Explain. **NA**
Comments:

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

NA / **Yes** / **No**
Comments: An EB was not included as part of the scope for this project.

i. All results less than PQL? **NA** / **Yes** / **No**
Comments:

ii. If results are above PQL, what samples are affected? **NA**
Comments:

iii. Data quality or usability affected? Explain. **NA**
Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

a. Are they defined and appropriate? **NA / Yes / No**
Comments: *Data flags/qualifiers are on page following case narrative.*

ATTACHMENT 2

**IMPORTANT INFORMATION ABOUT YOUR
GEOTECHNICAL / ENVIRONMENTAL REPORT**



Date: July 22, 2010
To: ADOT&PF
Re: Maintenance Stations, Various Locations, AK

Important Information About Your Geotechnical/Environmental Report

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors, which were considered in the development of the report, have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland